THE

BRITISH JOURNAL

OF

CHILDREN'S DISEASES.

VOL. XVII. APRIL—JUNE, 1920. NOS. 196–198.

Original Articles.

STIGMATA OF PREDISPOSITION TO BONE AND JOINT TUBERCLE.

By W. C. RIVERS, M.R.C.S., D.P.H.,

Tuberculosis Officer, Barnsley District, West Riding, Yorks.

I.—HISTORICAL.

THE records of osseous and articular tuberculosis are as old as those of consumption, for spinal caries was described by Hippocrates in the 'De Articulis.' But they are nothing like so complete, because, from the nature of these affections, no reliable diagnosis was possible until a developed science of anatomy existed. The term "white swelling" was introduced by Wiseman in the seventeenth century; and it was after, not before, his time that rheumatic was separated from tuberculous arthritis. Men then soon noted the extrinsic contributory causes—bad hygiene and the like. And they went on speculating as to a *dyscrasia*—a peculiarity of constitution, a mysterious internal essential cause, co-operating with an external noxa to produce the tubercles. This speculation has not, as one says, had much luck; for now the external noxa is identified and isolated, we find we can infect with it the most healthy, refractory animal. Nevertheless the tradition of the older writers is continued. Within the last thirty years a scrofulous "exudative diathesis" has been described, by no writer very differently than as a constitutional

anomaly facilitating infection by micro-organisms, especially tubercle bacilli. How Molière would have relished that definition! Quite justified is the comment of a bacteriologist (Cornet) that such scrofulous predisposition is nothing but scrofula itself.

Yet there may be some degree of dyscrasia after all: experimental evidence only makes it unlikely; does not (lacking correspondence with natural conditions of infection) disprove it. There lacks evidence for it as yet, however, while there does exist neglected evidence for our present subject—definite personal characteristics found more frequently in the subjects of bone and joint tubercle* than in the non-tuberculous, inexplicable as the result of tuberculosis, and pointing to innate predisposition. The first mention of such seems to come from Thomas White (1):

"Persons of red or light coloured hair are said to be peculiarly subject to this disease; but that this complaint is not confined to the colour of the hair, or the complexion, is evident from the numbers of people that have dark hair and similar complexions being very frequently strumous."

Could he have foreseen his subsequent independent confirmers, White might have spoken more confidently. Andral (2) wrote on those predisposed to tubercle:

"The colouring matter thus deficient in their skin is likewise so in their eyes, which retain the blue tint of infancy, and in their hair, which is light coloured, and also small in quantity. Their muscles are soft and slender, and show little contractile power; their blood is serous, and deficient in fibrine and colouring matter; and among their secretions the mucous predominate. In these individuals, lastly, sanguineous congestions are formed with remarkable facility in various parts of the skin and mucous membranes; and when once formed, never terminate, but continue in the chronic state and are frequently succeeded by ulcerations. . . . It seems that such persons preserve in adult age several of the characters belonging to the age of childhood, considered in its healthy or morbid state: their organisation is in a manner arrested in its development. Such a constitution as this may have been formed without any external cause appearing to contribute to it. In other cases it appears to be acquired . . . thus, then, there are certain habits of body, certain constitutions, innate or acquired, that predispose to the development of tubercle; that is to say, it most frequently appears in those constitutions; and it is a remarkable

* Other forms of surgical tuberculosis are not necessarily excluded; but it is logical to begin with one form and limit the inquiry to that at first.

fact that it is in such cases especially we observe this morbid production developing itself in several organs at once, both in old and young."

Again, Hufeland (3), discussing the scrofulous, speaks of "Une tête de grande dimension, surtout dans sa partie occipitale . . . des cheveux blonds . . . des yeux bleus"; while Landouzy (4), the well-known Paris professor who died lately, retained to the end these his early views on predisposition:

"Je vous ai dit, par contre, que si la tuberculose ne trouve pas pareil terrain propice à son dévelloppement, il en est un autre sur lequel la tuberculose se dévelloppe avec une fréquence singulière et germe avec une facilité déplorable. Je fais allusion à ce que, au lit le malade, vous m'avez maintes fois entendu appeler, en manière d'abréviation, le *terrain vénitien.* [Elsewhere he explains that 'vénitien' refers to the Venetian beauties with reddish-coloured hair that Titian loved to paint.] Vous savez que j'entends par là le tempérament et la constitution de ces malades à peau fine, d'un blanc cireux, aux cheveux et aux poils roux, aux transpiration faciles et odorantes. Je vous ai montré quelle singulière prédisposition avaient ces malades pour la tuberculose. . . . Je vous ai dit que, depuis plusieurs années, je n'étais jamais passé à côté d'un malade roux sans m'enquérir de l'affection dont il était atteint, et que les quatre cinquièmes de ces vénitiens je les avais trouvés tuberculeux."

Shrubsall's (5) scientific work supplies a needed check upon these clinical *aperçus*; for it might be that sick children generally, not the surgical tuberculous ones alone, tended to be of fair or rufous complexion. However, in an examination of the hair colour in large numbers of children from the medical casualty departments of several London hospitals, contrasted with the same characters as noted in children in the schools and playgrounds of various quarters of the metropolis, care being taken to comprise the area of attraction of each of the hospitals under consideration, he found that although fair hair did indeed preponderate markedly in the hospital class, yet red hair appeared in about the normal proportion. Also in a discussion Shrubsall(6) said that although phthisical children were apt to be brunettes, yet in cases of joint or glandular tuberculosis fair traits dominated. There seems to be only one contradiction of the existence of this pigmentary stigma of predisposition (for the most hardened contagionist would hesitate to explain red hair as tuberculo-toxic), one in a text-book, not the result of a special investigation into the point. Biedert (7) wrote that according to most opinion, skin and hair colour have no influence in predisposition.

We need hardly appeal to the principle of the actual association of disease with pigmentary peculiarities, so well established is it. Darwin (8) has taken it as one of his examples of the power of selection in forming a domesticated breed. From facts collected by Heusinger, he says, it appears that white sheep or pigs are injured by certain plants, dark-coloured individuals escaping. Prof. Wyman told him that on asking some farmers in Virginia how it was that all their pigs were black, they said that the pigs ate the pink roots of *Lachnanthes*, which coloured their bones pink, and which caused the hoofs of all but the black varieties to drop off; and one of the "crackers" (*i. e.* Virginian settlers) added, "We select the black members of a litter for raising, as they alone have a good chance of living." In human subjects the association of myopia with brown eyes and like instances will readily occur to the mind. We pass to consideration of

Peculiarities of the Skin.

(1) There is first a certain pallor—not that present in the developed disease but antecedent to it. Andral (*loc. cit.*) mentions an especial tendency for tubercle "to grow in those individuals whose skin is very fair, and, as it were, blanched, and without any trace of colouring matter in its capillaries." (This is exclusive of red patches over the malar bones.) Hufeland (*loc. cit.*) also speaks of "une peau blanche," and we have seen, too, Landouzy's mention of a waxy whiteness. This pallor might reasonably be ascribed to the depressing effect of latent or nascent tubercle not yet clinically evident, were it not for Beneke's work. Beneke (9), after laborious and minute measurements of 540 bodies and more, came to the following main conclusions:

"Im grossen ganzen lassen sich die Konstitutionsanomalien nach zwei ganz verschiedenen Richtungen trennen. Bei der einen gestaltet sich die Kombination der relativen Grössenverhältnisse der einzelnen anatomischen Apparate derart, dass die Leistungsfähigkeit und Leistung der ganzen Maschine hinter der Normalen Zurückbleibt; bei der anderen dass sie das mittlere Mass derselben überschreitet.

"Was die erste Kombination anbetrifft, so finden wir hier in den typischen Fällen: ein relativ kleines Herz, ein relativ enges arterielles Gefass-system, relativ grosse Lungen, eine relativ kleine Leber, einen relativ kurzen Dünndarm. Bei der entgegengesetzten Kombination dagegen: ein relativ grosses Herz, relativ weite arterielle Gefässe, relativ kleine Lungen, eine relativ grosse Leber und einen relativ langen Dünndarm von relativ grosser Kapazität.

"Auf den Grund und Boden der ersten Kombination entwickeln

sich die sogenannten erethischen Formen des skrofulösen Krankseins, die Osteomyelitiden [tuberculous osteomyelitis is clearly meant: in the text strumous joint disease is mentioned also] des Kindesalters, die skrofulösen (käsigen) Lungenphthisen, die chronischen Anämien . . ."

This finding, of what might be called the low-powered and the high-powered types* of the human machine—the first characterised by small circulatory and alimentary apparatus but large lungs, being the one more liable to tuberculosis—is a working out of the conceptions of Rokitansky (10) and Virchow (11), which indeed had been hinted at by Galen (12) and considered by Laënnec (13), of a congenitally small heart and arterial system being common in consumptives. Naturally there were many (of lesser name, by the way) who urged the small heart was tuberculo-toxic; the small vessels they did not discuss. However, through the X ray, particularly by the method of Moritz (14), the congenital "Tropfenherz" of the phthisical has been verified, and is described in radiological text-books. It is therefore quite on the cards that Beneke may have been right in ascribing to the surgical tuberculous patient, too, a small heart, a narrow aorta, and deficient capillaries. If these anatomical characteristics are explained as the result, not the contributory cause, of the tuberculosis found with them, then in fairness the anatomical characteristics of the second type, the machine of high power and pressure, must be ascribed to the maladies found along with it. For Beneke goes on to say that with the opposite conditions—big heart, wide arteries, small lungs, big liver, long and capacious upper intestine—you get especially rickets, hyperplasia of connective tissue, corpulence, atheroma, psoriasis, carcinoma. Now who would care to maintain that any one of these six can modify body structure after such a fashion? At all events Beneke's results do go to explain the skin pallor of the predisposed that Andral and Hufeland speak of. This pallor may be akin to that of chlorosis. Virchow's memoir, already cited, has some well-reproduced illustrations of gross aberrancies in the circulatory system (for instance of the intercostal arteries) in chlorotics.

Again, Beneke implies, when he ascribes to the first type a subnormal functioning of the whole organism, a certain weakliness of constitution. This is consonant enough with several observations. Delpech (15) says of tuberculous caries:

"Cependant elle survient bien plus fréquemment dans les individus

* One is reminded of the world-wide experience of life assurance companies, that policy holders of subnormal weight die oftener than the average of phthisis, that the overweights die especially of apoplexy, and that the overweights as a class have little longevity.

doués d'une constitution faible, ceux où les muscles sont peu prononcés, où le tissu cellulaire est abondant et mou . . ."

Hufeland (16) gives advanced age of the parents, especially the father, at the time of procreation as a predisposing cause; while the well-known statistician Körösi (17) said that children born of mothers under the age of nineteen years showed an abnormally high mortality from scrofula and from congenital debility. Of course immaturity or advanced age of the parents is an acknowledged detriment to the offspring. There is also this strong general argument, that as tuberculosis is admittedly predisposed to by external depressing influences, deficient food, faulty hygiene, debilitating diseases, trauma and the like, it should in similar fashion be favoured by initially depressed health such as arises from a weakly constitution. Of such weakliness pallor will obviously be a possible sign.

(2) Cornet (18) advances as a predisposant to surgical tuberculosis increased access to external noxæ produced by heightened permeability arising chiefly from *thinness of the skin;* and Cornet was a bacteriologist of "strengster Kochscher Observanz," little likely to show needless favour to the endogenous factor in disease. Moreover there are good reasons for his view. Cornet showed that by rubbing in cultures tubercle bacilli could be made to traverse unbroken skin without leaving a trace of their passage through it, and to provoke reaction in the corresponding lymphatic glands. He pointed to the facts that surgical tuberculosis was commoner in children than in adults, and that children's skin was the thinner, and moreover kept on the stretch by their rapid growth; also commoner (allowing for their slighter exposure to trauma) in females than in males, the skin in the former case being again the thinner.* From these and other arguments, accessible in the source cited, he concluded that heightened permeability of the skin might well be an individual personal predisposing factor.

This is likely on many grounds, for in the subjects of surgical tubercle are often seen lesions which by animal inoculation and other tests seem due to pyogenic organisms, not to the bacillus of Koch. It is well known how, along with an unmistakeably tuberculous joint, for instance, one may find in quite another part of the body a collection of puriform matter (which collection behaves, however, like an ordinary cold abscess), which some call tuberculosis of the connective tissue, others pyogenic scrofulosis, because tubercle

* A striking illustration of this is quoted from the time of the French Revolution. Human skin being then worked up in a leather factory, it was found that that of women was fit only for articles like braces.

bacilli can often not be found in it. Ponfick was perhaps the first to point to this duality of scrofulous and strumous lesions, well expressed by Ziegler (19) in the following passage, although his catholicity may go too far in including syphilis :

" Untersucht man derartige Krankheitserscheinungen genauer, so findet man, dass meistens ätiologisch wohl bekannte Krankheiten, specifische Infectionen, unter dem angegeben Bilde verlaufen, und Zwar vornehmlich Infectionen mit Streptokokken, Staphylokokken, Tuberkelbacillen und Syphilisvirus. Die Scrofulose ist also keine besondere Krankheit, sondern nur eine besondere Erscheinungsform verschiedener Infectionen, und wenn man den Begriff der Scrofulose als Bezeichnung für einen besonderen pathologischen Zustand beibehalten will, so muss man ihn Soweit einschränken, dass man der Scrofulose nur eine besondere Disposition zu den genannten und auch zu anderen mit Entzündung und Drüsenschwellung verbundenen Infectionen zuerkennt."

Since, then, the vulnerability to scrofula does not concern only the tubercle bacillus, but also pus organisms, the probability of that vulnerability sometimes consisting in a highly permeable, thin skin is increased.

Cornet does not mention red hair in his inquiry into predisposition. It is possible, however, that part of the liability of red-haired individuals to surgical tubercle may be in consequence of greater permeability or thinness of their skin. As has been seen, Landouzy speaks of the "peau fine" of his Venetian type. A well-known anatomist is good enough to write that he is unaware of any investigation on this point having been made, "but there is a certain redness of hair always accompanied by a white and delicate skin—a skin which suggests a thyroid effect to me." A well-known dermatologist is likewise ignorant of any such work.

(3) *Ichthyosis.*—From the side of the tuberculosis workers references to the occurrence of ichthyosis amongst the subjects of surgical tubercle are scanty. Lebert (20) gives it passing mention amongst the many skin affections of scrofula, but apparently without regarding it as preceding the scrofula. I (21) found in a large number of consumptives ichthyosis present seven times as frequently as in a comparable control of normals ; it long preceded the tuberculous lesion, as is indeed likely, ichthyosis usually dating from early infancy. I had likewise noticed ichthyosis common in surgical tubercle. The dermatologist Tommassolli (22) said that amongst males ichthyosis affected almost exclusively those who were originally feeble and of imperfect development; and that even when

ichthyotics seemed in possession of good general health, the disorder was nearly always accompanied by functional derangement of some organ or system, or else by very evident predisposition to a grave visceral affection, like tuberculosis. He also quoted from unspecified "reports of Vienna clinics," to the effect that ichthyosis ought really to be removed from the dermatological department to some other one, either because of tuberculosis—the most frequent complication—or heart disease, enlarged lymphatic glands, rickets, idiocy and so forth. Lastly, Du Mesnil (23) communicated two cases of coincidence of tuberculosis (one pulmonary, the other of the cervical lymphatic glands) with ichthyosis, and spoke of attenuated forms of the latter, consisting in xerodermia limited to the external surfaces of the arms and legs, which were to be observed in strumous subjects.

Now on several grounds there is strong *à priori* likelihood that ichthyosis should predispose to surgical tuberculosis. In the first place ichthyosis increases the permeability of the skin, weakens it as a barrier to infection, by reason of the eczema and chapping to which ichthyotics are very liable. The numerous tiny breaches of continuity thus produced must facilitate infection. Cornet (*loc. cit.* s. 121) found that in skin with no external injury a simple application of tubercle culture was without ill-effect. Even in a region like the penis a slight wound was necessary to infection. In his chapter on prophylaxis he advises that the small scratches children are apt to get on their fingers should be carefully cleansed and covered. Ponfick (24) said that the small rhagades inseparable from eczema must favour in a high degree the entry into the system of every kind of germ. Indeed it is supposed that in this way, partly, pyogenic scrofulosis leads on to tuberculous scrofulosis (in Landouzy's epigram, "Terrain scrofuleux, graine tuberculeuse"). Thus an ichthyotic skin, with its chapping and liability to small septic lesions, is in like case with one already infected with pyogenic scrofulosis.

A second ground of vulnerability to tubercle is that, as we have seen, according to some writers ichthyotics are of originally weak constitution.

Thirdly, it is well known that ichthyotics are subject to congenital defects and abnormalities, both internal and external. Now Cornet allows that congenital abnormalities of the lymphatic system—and, as he says, Virchow found them more abundant there than anywhere else—might greatly facilitate tuberculous infection. Again, as already mentioned, in the illustrative plates of the main arterial system of chlorotics and tuberculous patients, Virchow figures some surprising abnormalities in the intercostal arteries. It is quite

possible that surgical tuberculous patients, who, according to Beneke, have a similar circulatory apparatus, may be over-liable to congenital defect. Very familiar is the frequency with which abdominal tuberculosis is met with in operations upon ovarian tumours,* or in hernial sacs. Hufeland (of Jena, p. 18) spoke of spina bifida as relatively frequent in scrofula. We think, too, of the liability to phthisis of idiots, lunatics, and the subjects of congenital heart malformation. Red hair is something of an anomaly—at all events in the Latin races, such as Landouzy's French patients. And the freckles which almost invariably accompany red hair are in essence a degenerative phenomenon. Freckles (syn. *Lentigo, Ephelis*) are, according to the best dermatological authority, which seems to follow Moritz Cohn (25), increased deposits of true melanin in a circumscribed portion of the basal layers of cells of the *rete Malpighii*, with a few pigment-granules in the papillary layer. According to Jamieson (26), a congenital disposition to their evolution must be supposed, and Hebra (27) said they occurred only in individuals with red or golden hair. This last refers however to large freckles, *lentigines*, as opposed to *ephelides*, the smaller kind; it is well known that the freckles of the red-haired are very large ones. The associations of marked freckling seem to be morbid—(*a*) malignancy, (*b*) nervous disease, (*c*) ill-health.

(*a*) In ordinary epithelial growth "the loss of the prickles is much more rapid and earlier, where pigment [of *nævi spili* or of *lentigines*] is present, so that some softening action on the epithelium, and especially on the epithelial fibrillation, can hardly be denied" (28).

Radcliffe-Crocker (29) says that pigmented moles sometimes commence apparently as lentigo, and subsequently become prominent and assume the mole character. Such a pigmented mole would appear to constitute, as it were, a sort of half-way house between freckles† and xerodermia pigmentosum—a grave degenerative skin disease, of which freckles are a feature and which goes on to atrophy, telangiectases, warts and cancers.

(*b*) As regards the association with nervous disease, Radcliffe-Crocker has an instructive paragraph (*loc. cit.*, p. 608):

"Lentiginous pigmentation is sometimes unilateral. Such a case is depicted in my atlas. . . . Robinson, Fordyce, Fox and Bronson of New York have had similar cases, and one was published by Féré in France." From a footnote and from further information

* See, for instance, Osler's well-known text-book, 6th ed., p. 310.

† The distinction between lentigo and ephelis made above by Hebra would seem to be rather academic. It is certainly not adhered to by most dermatologists.

we gather that both Bronson's and Fordyce's cases had infantile paralysis, while Féré's was an epileptic.

(*c*) *Ill-health.*—The same authority (p. 609) writes that defective nutrition is a cause of symptomatic lentigo, which is seen in association with anæmia, constipation, and lesions of the abdominal viscera. Lastly, it is a familiar fact that light-haired persons and red-haired persons do not bronze with sunlight; they "burn" red or freckle. Hebra (*loc. cit.*, p. 13) considers that failure to bronze with sunlight is a sign of ill-health. "It is well known that many individuals can be exposed to the greatest heat of the sun without becoming bronzed, or at least markedly so, but retain their pale complexions. This applies to chlorotic and tubercular subjects. [A significant conjunction, in view of Virchow's and Beneke's similar one on other grounds.] On the contrary, these same individuals become bronzed so soon as they are exposed to the above-named external influences if, in the course of time, they recover from their constitutional affection. It is frequently said in ordinary modes of speech, 'I easily become bronzed,' or, 'I become bronzed with difficulty.' The scientific comment on this mode of speech would be—'Healthy people bronze easily, sick people only with difficulty, and slightly.'"

It is possible, however, in view of modern work on pigmentation in tuberculosis, that there are other explanations. Besides, as already mentioned, we know that there are quite healthy persons who never bronze with sunlight, who are commonly of blonde complexion or red-haired. Now, it is a fact that such non-bronzing blondes are disliked as patients by most surgical tuberculosis specialists. Most, not all. Oehlecker (30), for instance, denied that patients who pigmented well did any better than the average. But general opinion is the other way, and indeed one theory (31) of the benefit of heliotherapy is that skin-pigment and its derivatives are carried off in a dissolved condition, gain the blood- and lymph-streams, and thus arrive at the confines, at any rate, of the tuberculous focus, upon which they have specific effect. A skin poorly or abnormally pigmented, then, should, on this showing, be *à priori* a likely component in predisposition to surgical tubercle.

So much for peculiarities of the skin in surgical tubercle, in the case of all of which probability certainly inclines to the side of their being autochthonous, not tuberculo-toxic or otherwise acquired.

Non-Tuberculous Nasal Affections.

There are two of these eminently characteristic of scrofula and surgical tubercle—chronic catarrhal rhinitis and ozæna.

The former, known by the classical symptoms of stuffiness, increased secretion, eczema introitus narium, thick upper lip, swollen tip of the nose, occurs especially in connection with scrofula proper,* that is, with enlarged cervical glands and ocular phlyctenules. But in a milder form it is common enough in bone and joint tuberculosis also; and this chronic rhinitis has been put down, reasonably enough, as a nasal manifestation of pyogenic scrofulosis, of that chronic infection with pus organisms which often precedes the tuberculous infection.

The latter, ozæna, was formerly reckoned as a nasal manifestation of tubercle—as a tuberculous lesion—when occurring in connection with tuberculosis elsewhere; although now the general opinion goes that it precedes the tubercle and predisposes to it.

The consideration of most of these points will be taken up in the next number, when we compare children suffering from bone and joint tuberculosis with normal children.

REFERENCES.

(1) 'A Treatise on Struma or Scrofula,' London, 1784, p. 9.

(2) 'A Treatise on Pathological Anatomy,' Townsend's transl., Dublin, 1829, p. 535.

(3) 'Manuel de Médecine pratique,' Paris, 1848, p. 464.

(4) "Comment et pourquoi on devient tuberculeux," 'Progrès Méd.,' 1882, x, p. 684.

(5) "The Anthropometric Investigation of Hospital Patients," 'Brit. Med. Journ.,' 1904, ii, pp. 1689, 1747.

(6) 'Proc. Roy. Soc. Med.,' 1911, iv, Epidem. Sect., p. 179.

(7) "Behandlung der Skrofulose" in Penzoldt and Stinting's 'Handbuch der Speciellen Therapie,' Jena, 1895.

(8) 'Origin of Species,' 6th ed., London, 1882.

(9) 'Constitution und Constitutionelles Kranksein des Menschen,' Marburg, 1881, pp. 47, 48.

(10) 'A Manual of Pathological Anatomy,' New Sydenham Society's trans., London, 1852, vol. iv.

(11) 'Ueber die Chlorose, etc.,' Berlin, 1872, p. 26.

(12) 'Medicorum Græcorum Opera,' Kuhn's ed., 1829, ix, p. 179.

(13) 'A Treatise on the Diseases of the Chest,' Forbes transl., 2nd ed., London, 1827, p. 286.

(14) "Ueber orthodiagraphische Untersuchungen am Herzen," 'Münch. med. Woch.,' xlix, p. 1, 1902.

(15) 'Des Maladies réputées chirurgicales,' Paris, 1816, iii, p. 307.

(16) 'Ueber die Natur, Erkenntniss, und Heilart der Skrofelkrankheit,' 3rd ed., Berlin, 1819, p. 20.

(17) Donath, "I. Körösi's Statistik über die Sterblichkeit der Stadt Budapest," 'Wien. med. Woch.,' 1885, xxxv, p. 1353.

(18) 'Scrofulosis,' Bullock's transl., London, 1914, pp. 61 *et seq.*

(19) "Tuberkulose," in Eulenburg's 'Real-Encyclopädie,' 3rd ed., 1900, xxiv, p. 610.

* Needless to say, the Continental term "scrofulosis" (or at all events tuberculous or mixed scrofulosis) embraces all varieties of what Anglo-Saxon workers understand by surgical tubercle, *e.g.* bone scrofulosis, lymphatic gland scrofulosis, etc.

(20) 'Traité pratique des Maladies Scrofuleuses et Tuberculeuses,' Paris, 1849, p. 199.

(21) 'Three Clinical Studies in Tuberculous Predisposition,' London, 1917, pp. 2 *et seq.*

(22) 'Annales de Dermatologie et Syphilis,' 1893, 3e sér., iv, pp. 537, 709.

(23) 'Thèse de Montpellier,' 1902.

(24) "Ueber die Beziehungen der Skrofulose zur Tuberkulose," '17 Versammlung der Gesellschaft für Kinderheilkunde,' 1900; Bergmann, Wiesbaden, 1901, cit. by Schlüter, 'Die Anlage zur Tuberkulose,' Leipzig, 1905, p. 188; also, '72 Versammlung deutscher Naturforscher und Aertze,' September, 1900, p. 387.

(25) "Zur Anatomie der Epheliden, Lentigines und Nævi pigmentosi," 'Monats. f. prakt. Derm.,' 1891, xii, p. 119.

(26) 'Diseases of the Skin,' London, p. 413.

(27) 'Diseases of the Skin,' New Sydenham Soc. transl, 1874, iii, p. 2.

(28) Unna, 'Histo-pathology of Diseases of the Skin,' English ed., transl. by Walker, 1896, p. 1136.

(29) 'Diseases of the Skin,' London, 1903, i, p. 608.

(30) 'Hamburger Ärztlicher Verein,' February, 1918; report in 'Centralblatt f. die gesamte Tuberkulose-Forschung,' 1918, xii, p. 158.

(31) *Cf.* Jesionek: "Heliotherapie und Pigment," 'Zeitschr. f. Tuberkulose,' 1915, xxiv, p. 401. Bernhard, 'Sonnenlichtbehandlung in der Chirurgie,' Stuttgart, 1917.

TRAUMATIC STRICTURE OF THE URETHRA IN CHILDREN AND YOUNG SUBJECTS, WITH SOME REMARKS CONCERNING THE IMMEDIATE TREATMENT OF RUPTURED URETHRA.

By A. Ralph Thompson, Ch.M., F.R.C.S.,

Surgeon in Charge of Genito-Urinary Department, Guy's Hospital, London.

In the following paper I propose to consider a few practical points in so far as they affect the very important injury, occurring so very frequently in young subjects, which is known as rupture of the urethra, and which if treated inadequately may, and probably will, lead to a traumatic stricture, which, as is well known, has very disastrous results for the patient.

Three typical cases will first be considered as regards the history of the accident, and a short account of the treatment which should be adopted immediately by the practitioner.

Case 1.—S. S—, aged 8 years, in 1912 was climbing on a building in order to fetch a cricket-ball when he slipped and fell astride a dustbin. For some reason after the accident he went into a lavatory and tried to pass water, but found he could not. He did not suffer from faintness, and, in fact, managed to walk home. The day after the accident—the patient not having passed water—the

penis and adjacent parts became much swollen. After having been seen by two medical men he was taken to an infirmary, where a catheter was passed through the urethra and secured in position. He was eventually discharged as incurable and was admitted to hospital, when apparently the same pessimistic view was taken as regards the prognosis. He was then admitted under my care into the Victoria Hospital for Children.

There was a stricture 5 in. from the meatus and situated in relation to the posterior part of the spongy urethra. Only a small instrument could be passed through it. Perinæal section was performed and the stricture divided along its length—it was about ¾ in. long. Perinæal drainage was carried out for some time, and, eventually a No. 8 English catheter could be passed easily. He continued to attend my out-patient department at Guy's Hospital, and up to quite recently has had a good stream of urine and an instrument of moderate size could be easily passed. He now (May, 1920) has still a good stream of urine, but, using reasonable means at out-patients', I cannot pass an instrument through the stricture.

Case 2.—S. C—, aged 16 years, suffering from congenital syphilis, was referred to me by my friend, Mr. C. H. Mills, from St. Paul's Hospital, which at that time was so full that the patient could not be admitted. The history, as given by the patient, states that he fell across a paling. He was taken to an infirmary and was operated upon immediately on admission. Apparently a perinæal section was performed. He was in the infirmary for eight weeks. The urine was passed very slowly. At the end of twelve months he attended at St. Paul's Hospital, and, as stated, was sent on from there to Guy's Hospital. On admission to Guy's Hospital he was suffering from a good deal of pain, due to a distended bladder, and had incontinence of urine. A moderate-sized metal bougie was passed without any difficulty,-and then a No. 7 English catheter. The bladder was washed out regularly, and the patient was discharged shortly with full control of his water and able to pass it well. The urine, which had been alkaline and turbid, became acid and clear. There is now no difficulty in passing a moderate-sized bougie, and no pain or tenderness is manifest during its passage.

Case 3.—E. T—, aged 15 years. Fell off a ladder astride the handle of a barrow on December the 15th, 1916. He was admitted to Guy's Hospital, where perinæal section was performed the following day. After discharge from hospital he was sent on to the Genito-urinary Out-patient Department, where he came under my care in

February, 1917. The wound had healed well, and practically there was no difficulty in passing an instrument of moderate size.

Patient is now (1920) attending the Genito-urinary Out-patient Department regularly once a week. He usually passes a No. 8 *coudé* catheter on himself quite easily, but if for any reason he fails I have no difficulty in passing a No. 14–18 (French size) metal bougie.

These cases have been selected from some eight or ten examples of ruptured or damaged urethra, and will form the text of the present paper.

There are certain diseased conditions peculiar to children, and, whilst they may not be so numerous, there are certain accidents which are peculiar to children. Of these accidents it may be said at once that no injury is at the same time so common and of such grave significance as that of rupture, partial or complete, of the male urethra in a young subject. The consideration of this important and grave injury may be divided into three fairly obvious parts, viz. (1) diagnosis, (2) prognosis, (3) treatment.

Diagnosis.—The diagnosis of ruptured urethra must not rest upon a hope that nothing serious has happened. The history of the accident, which can usually be supplied quite adequately by the patient, should point to the correct diagnosis, and it is never safe with a history of a fall upon the perinæum to neglect the probability of a rupture of the urethra.

Position of rupture.—This is stated to be situated usually in the region of the triangular ligamant or membranous part of the urethra; but it may occur in the spongy urethra in that position where the urethra was nipped between the force applied externally and the counter-force supplied by the front part of the pubic bone, and so a rupture of the urethra may occur further forward than that usually stated.

For an example of a case of stricture in the middle of the spongy portion of the urethra the following case may be cited: A boy, aged 8 or 9 years, fell from a pillar on to the pavement below with both his lower limbs strongly abducted—in such a way as to nip his penis between the pavement and the front part of the symphysis pubis. The penile urethra was ruptured from 2½ to 3 in. from the meatus—*i.e.* about the same distance in front of the membranous portion. He attended my out-patient department at the Victoria Hospital some time afterwards, when he showed a well-marked stricture in the region of rupture. At operation the stricture was found to be tight, quite short, and almost diaphragmatic, thus

admitting of easy excision of the strictured area and suture of the divided ends of the urethra with a good result up to three years after the operation. I was unable to learn his subsequent history.

If, however, a rupture of the urethra is associated with a fracture of the pelvis it is situated as a rule in the membranous portion.

Just as a cystoscope may be used with great advantage in the diagnosis of a ruptured bladder and should be used as early as possible, so a urethroscope might be used profitably in diagnosing injury to the urethra, care being taken to remember that the very strictest asepsis must be ensured, especially if a fracture of the pelvis be associated with the damage to the urethra. The fracture of the pelvis is, then, really a compound fracture, and is subject to all the rules and principles of surgery as applied to compound fractures.

There may be escape of blood from the urethra, the bleeding being independent of any passage of urine.

Position of rupture relative to urethral lumen.—The rupture may be complete or incomplete. If incomplete it may be situated on the upper or under surface. This is very important, as if the urethral mucous membrane is not completely divided, and there is a strip of undivided mucosa in the region of the injury, the prognosis is much better than when complete rupture has taken place.

It can hardly be said that the prognosis of rupture of the urethra is really very grave as far as immediate symptoms go unless it be complicated with other injuries, such as fractured pelvis, but the remote prognosis is indeed serious. In one respect, however, immediate prognosis may be very grave. There may be extravasation of urine. I find as a practical fact that students are not very quick in discovering a perinæal swelling, and extravasation of urine may have advanced quite considerably before it is supposed to have occurred. In a case, therefore, of suspected rupture of the urethra careful attention must be directed to the occurrence or abeyance of micturition and the presence or formation of a swelling in the perinæum due to extravasation of urine. In a number of cases, of course, so-called extravasation of urine is a complete misnomer, the condition being one of acute perinæal cellulitis; but in these cases of ruptured urethra occurring in young subjects the swelling is due really to extravasation of urine, which in the type of cases under review may and probably will lead to septic changes of a most grave nature taking place, but symptoms of which may be

quite late in appearance. This brings us at once to a consideration of the immediate treatment.

If the surgeon is lucky or particularly skilful in palpating the urethral passage with a soft instrument he may endeavour to pass such an instrument along the damaged urethra. As the late Mr. R. Clement Lucas was in the habit of teaching, a *coudé* catheter of moderate size should be passed with its point projecting on the dorsal surface of the urethra, as the damage, if only involving a part of the lumen of this tube, usually affects the ventral surface. If this fails the point may be directed regularly in all directions until, as it were, "the compass is boxed." If this "boxing of the compass" be performed carefully the catheter may be directed into the bladder. If the passage of the catheter is, however, not possible, the question arises as to what is to be done? Perinæal section naturally suggests itself, and for at least two reasons: first by performing a perinæal section the divided ends of the ruptured urethra may be found, or if incomplete, the exact nature of the damage may be ascertained; secondly, drainage of the bladder and drainage of the damaged tissue may be done through the same incision.

It would hardly appear possible that, the question of perinæal section being raised and its performance decided upon, any further discussion on the question could be initiated, but in certain cases extravasation of urine having taken place, and septic conditions in this way likely to occur, the question of an alternative or additional *suprapubic cystotomy* may have to be considered. One enormous advantage of suprapubic cystotomy lies in the fact that such a wound is not liable to accidental septic contamination from the rectum, and that, by its adoption, the bladder is not likely to become the seat of secondary infection.

The following method of procedure is what I would recommend. By all means let a perinæal incision be made in order that, if possible, the ends of the ruptured urethra may be exposed, refreshed and immediately sutured together, and any local extravasation or sepsis dealt with. A perinæal incision is also advisable in order that by its aid a catheter may be directed into that part of the urethra which lies proximal to the site of injury. But even with a perinæal wound the proximal portion of the urethra may not be at all easily discovered. Any unnecessary handling, bruising or cutting of the adjacent parts is strongly to be deprecated in the attempted discovery of this proximal portion of the urethra, and I do not hesitate to recommend that in such a case the bladder be not opened *viâ* the perinæum, but that the suprapubic route be adopted for entering the bladder.

In addition to the advantages claimed for this method of opening the bladder retrograde catheterism may be practised, and a catheter inserted through the urethra from the bladder end, thus greatly facilitating the passage of an instrument along the whole urethra. Retrograde catheterism is not at all easy in the adult, but can be quite simply performed in the young subject. If, then, there is any difficulty in dealing with the rupture of the urethra from the perinæum, there should be no hesitation on the part of the operator in performing a suprapubic cystotomy and a retrograde catheterisation, making the suprapubic wound the chief route for drainage of urine from the bladder, leaving our perinæal wound for the adequate drainage of the parts around the seat of injury. If immediate suture of the ruptured urethra is decided upon, suprapubic cystotomy is all the more necessary in order to keep the parts at rest which lie around the area of suture. Suprapubic cystotomy is not to be considered, therefore, as an alternative to perinæal incision, but as an additional and frequently very necessary treatment.

These remarks about ruptured urethra and its immediate diagnosis and treatment have been made as a knowledge of them may prevent the stricture being as bad in its results as it might otherwise be.

Prognosis.

But there is a consideration which must be taken into account also in connection with the prognosis of traumatic stricture. We may ask ourselves the question: Why is the prognosis of traumatic stricture so grave? Why is it worse than a stricture which is due to gonorrhœa? as I consider it to be. [There are four cases of traumatic stricture between 1890 and 1910 in the Guy's Hospital post-mortem reports, the average age at death, which in every case was attributable directly to the stricture, being just over forty.] There are, in the writer's opinion, several reasons for this. In the first place a rupture of the urethra, even if incomplete, necessarily entails periurethral and extra-urethral damage, the whole corpus spongiosum may be ruptured transversely, and there is considerable bruising of the parts around and outside the urethral tube. The normal periurethral and extra-urethral tissue is replaced by fibrous tissue, and the consequent stricture, although it may be quite short, is very dense and thick as compared with a gonorrhœal stricture, which may be quite long but is rarely extra-urethral. Another reason for the grave prognosis as regards duration of life is this: The bladder, being that of a young subject, is capable of hypertrophying

to a considerable extent, and does not fail rapidly. Thus there may be a very considerable stricture developed, the bad results of which are not obvious to the patient, who may be passing his water with quite a good stream. In such cases it is very difficult to impress upon the young patient, or his friends, that there is anything serious the matter, and failure to pass a catheter is regarded as an error on the part of the medical attendant rather than indicative of a serious condition. But the difficulty is even greater than has been indicated so far. When the bladder fails, as fail it will assuredly do, badly directed efforts at catheterisation, which usually fail, are the cause of a sepsis which leads very quickly to fatal results.

The fact that a traumatic stricture which follows upon a rupture of the urethra at the age of ten years may be twenty years older than even an early case of gonorrhœal stricture must also be regarded as a grave factor in prognosis. I regard, however, the first and second causes of a grave prognosis as the most important, especially the inability to pass a catheter when acute retention consequent upon failure of the bladder occurs.

Another cause of difficulty increasing the gravity of the prognosis is the fact that the ends of the ruptured urethra, in addition to some retraction, may not be in line with each other ; thus the connection between them may lie in an oblique axis, and thus at least two sharpish angles in the course of the healed urethra may be developed —one at the proximal end, and another at the distal end of the damaged area.

Treatment.

A traumatic stricture having developed upon a rupture of the urethra as in the three cases which have been cited as exhibiting definite evidence of traumatic stricture the question arises as to the future method of treatment. One case, S. S—, has reached a stage when, owing to the difficulty in the passage of a catheter unless something is done, the bladder will eventually fail in its power to expel urine. He will get retention, the prognosis of which will be rendered no less grave because of the inability to pass an instrument, except in so far as inability to pass an instrument may lead to immediate suprapubic cystotomy without further tampering with the urethra.

I am not now concerned with discussing what ought to have been done on the receipt of the injury. We may lay it down as a rule that with rupture of the urethra the bladder should be opened

suprapubically and then drained by this route. At the same time the urethra should be exposed by a perinæal incision, a catheter passed from the meatus and from the bladder ends of the damaged portion, the urethral ends refreshed and sutured, local drainage undertaken as for ordinary wounds and local sepsis treated adequately. If these measures were more frequently undertaken according to the plan indicated we should see fewer of these disastrous cases.

But we have to deal with cases as we see them, and here are three cases with definite stricture of the urethra with practically all their life before them. What shall their treatment be? It must first of all and most emphatically be pointed out to the patient, and to his friends, that the condition is a most serious one, if not now, yet later, that he must keep himself under observation in the same genito-urinary department, and if possible under the care of the same individual who has seen him previously. Such cases are not those upon which students should be taught the commonly accepted manœuvres of passing a catheter. In these cases of traumatic stricture especially, the point of the instrument which is introduced is a palpating instrument—it must feel its way through the stricture; no general rule except this can be formulated for passing an instrument in cases of traumatic stricture. The first rule, then, is this: as long as a catheter can be passed by any one individual, and as long as the bladder shows no clinical or instrumental evidence of failure, so long may the patient continue catheter life. But constant catheterisation in order that the stricture may be kept dilated may not be possible, owing to the business of the patient or other home conditions. Or it may be that he is intending to go abroad, and the question of an operation presents itself for consideration. Catheterisation is then under certain circumstances not advisable nor possible. It is then necessary to perform some operation which shall be of practical utility. A traumatic stricture may be quite short and almost diaphragmatic, although it is always very dense. Such a stricture may be situated in the spongy portion of the urethra, and offers itself, under such favourable circumstances, for excision or even partial excision.

It would appear that the French school of urologists are responsible for many ingenious theories for curing the stricture by a radical operation. But whatever operation may be performed, there are certain important principles which must be followed:

(1) If there is a portion of normal urethral mucosa which is intact in the region of the stricture it must be conserved, and the

radical operation planned so as to maintain the integrity of this portion of the mucous membrane.

(2) All fibrous tissue should be removed as far as possible from the part affected and as little healthy tissue be removed as is compatible with an efficient operation.

(3) The portion of urethra which is to be operated upon should, after operation, be buried as deeply as possible in the surrounding parts. It is to be recollected that owing to various reasons—perhaps the injury, perhaps an immediate operation for relief of symptoms due to the original rupture—the stricture may be lying just under the skin, and the close contiguity of the stricture to the skin cannot be very favourable to its cure. Moreover the sutured urethra, after removal of the stricture by excision, or dissection, should obviously be buried as deeply as possible in order to lessen the chance of sepsis occurring which shall infect the sutured urethra. The deep burial of the excised and sutured region of the urethra may be effected by a series of Lembert sutures placed in the parts superficial to the plane of the urethra, and by the adoption of this method of suturing the urethra may be buried just as deeply as the operator desires. The gauze dressing of the wound should be included as an anchor dressing in the sutures which are used to unite the edges of the superficial skin of the penis or perinæum.

Summary.

(1) Traumatic strictures follow upon ruptured urethra in young subjects.

(2) Suprapubic cystotomy is strongly recommended as a routine incision which greatly assists the adequate treatment of ruptured urethra.

(3) The prognosis of traumatic stricture is very grave.

(4) Treatment by catheterisation may be performed, but this may fail and excision of the stricture be called for.

(5) The important principles in an operation for excision of a stricture are—(1) preservation of an intact urethra; (2) removal of as much fibrous tissue as possible; (3) deep burial in surrounding structures of the sutured urethra.

TWO CASES OF ANOMALIES OF GROWTH: UNILATERAL MACROSOMIA AND CONGENITAL OVERGROWTH OF THE RIGHT LEG.

By J. Black-Milne, M.B., C.M.

Unilateral Macrosomia.

There have now been a large number of these cases recorded, but

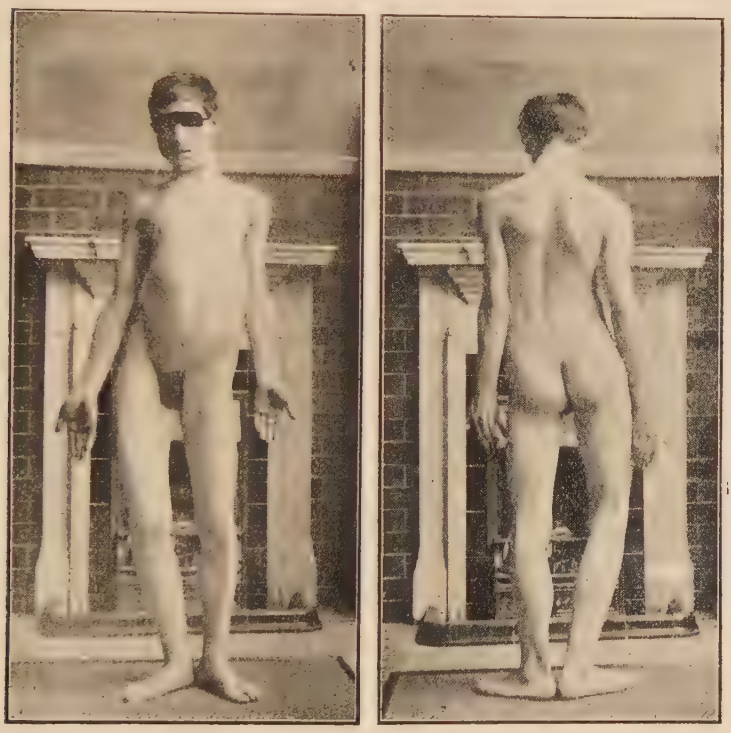

Fig. 1. Fig. 2.

Unilateral macrosomia.

nearly all in children, and for that reason the following account in an adult may be of a little more interest (*vide* Figs. 1 and 2).

F. B—, male, aged 18 years, was in the A.S.C. and admitted to the Brook War Hospital suffering from rubella.

Family history.—The patient stated that his father was about 6 ft. in height and his mother 5 ft. 6 in. He had three sisters and one brother, *all taller* than himself. There were no deformities or anomalies of growth in the family or in collateral lines.

The following measurements were made:
Height, 5 ft. $3\frac{1}{2}$ in; weight (stripped), 8 st.

	Right (Inches).	Left (Inches).	Difference (Inches).
Head.			
Glabella to occipital protuberance	11	$10\frac{1}{4}$	$\frac{3}{4}$
Sagittal suture to tip of mastoid protuberance	$8\frac{1}{2}$	$7\frac{3}{4}$	$\frac{3}{4}$
Ear.			
From extreme top to bottom of auricle	$2\frac{10}{16}$	$2\frac{6}{16}$	$\frac{1}{4}$
Thorax.			
Circumference at the level of the nipple	15	13	2
Abdomen.			
No appreciable difference on the two sides.			
Upper Limb.			
Humerus (ulna at a right angle, acromion to olecranon)	13	$12\frac{1}{4}$	$\frac{3}{4}$
Ulna (olecranon to styloid process)	11	9	2
From olecranon to tip of middle finger	17	$13\frac{3}{4}$	$3\frac{1}{4}$
Circumference of arm (middle third)	9	$7\frac{3}{4}$	$1\frac{1}{4}$
Circumference of forearm (upper third)	$9\frac{1}{2}$	$8\frac{1}{4}$	$1\frac{1}{4}$
Hand.			
Length from end of radius to tip of middle finger	$7\frac{1}{4}$	$6\frac{3}{4}$	$\frac{1}{2}$
Width across the distal end of the metacarpals	$3\frac{3}{4}$	$3\frac{1}{8}$	$\frac{10}{16}$
Circumference above the knuckles	8	7	1
Length of middle finger	$3\frac{3}{4}$	$3\frac{1}{2}$	$\frac{1}{4}$
Lower Limb.			
From the anterior superior spine of ilium to tip of external malleolus	$33\frac{3}{4}$	32	$1\frac{3}{4}$
Circumference of the thigh (middle third)	$18\frac{1}{4}$	$16\frac{1}{4}$	2
„ „ calf („ „)	$13\frac{1}{4}$	$12\frac{1}{4}$	1
Foot.			
Length from heel to tip of great toe	10	$9\frac{1}{2}$	$\frac{1}{2}$
Circumference round the heel and instep	13	$12\frac{1}{4}$	$\frac{3}{4}$
„ „ middle of the metatarsals	9	$8\frac{1}{4}$	$\frac{3}{4}$

Bones.

	Right (Inches).	Left (Inches).	Difference (Inches).
Patella—width across the centre . . .	2	$1\frac{3}{4}$	$\frac{1}{4}$
Tibia—width of inner surface below tubercle	$2\frac{1}{4}$	$1\frac{3}{4}$	$\frac{1}{2}$
Scapula from the inferior angle to middle of spine	$5\frac{1}{2}$	$4\frac{3}{4}$	$\frac{3}{4}$
Clavicles—length from end to end . .	$5\frac{3}{4}$	$5\frac{3}{4}$	*nil*

The pelvis was tilted about 2 in. from the horizontal, and the spine showed marked deviation to the left in the upper lumbar and lower dorsal regions. The hypertrophy was a true one, and there was no increase of subcutaneous tissue on the large side.

Skin.—No congested or discoloured areas nor capillary nævi. The patient has no recollection of these ever having being present.

The hair, nails and sweat-glands showed no difference on the two sides.

Eyes.—Palpebral opening about the same on both sides, and no appreciable difference in the size of the globes.

Tongue.—The right half was much larger and on protrusion deviated markedly to the left. The left side was abnormally small.

Fauces.—The uvula was about the middle line and the palate symmetrical.

Teeth.—Equally developed on the two sides.

The *face*, as a whole, did not show any striking irregularity.

The *fingers* on the left hand were considerably smaller.

The *toes* did not show so much difference.

Testicles.—The right was about of normal dimensions, whereas the left was abnormally small and not more than about half the size of the other.

Muscular power was decidedly less on the left side.

Internal organs.—These probably show as much difference relatively on the two sides as the structures above described, but very few autopsies have been recorded. Two cases were published by Dr. R. Hutchison, with post-mortem examinations, in which the asymmetry of the internal organs was well marked. These included all the paired organs and others, such as the thyroid and thymus glands. Another case, with an autopsy, was published by Dr. H. C. Gordinier, but I have not been able to refer to the details.

The condition described is always congenital, and the general view, and probably the correct one, is that the disproportion of the two sides increases with age. The patient stated that, as he became older, he experienced more fatigue and aching of the muscles of the back and legs on walking any great distance. As regards this point

two cases have been reported with contrary results. Dr. G. H. M. Dunlop, in describing a case, mentions that repeated measurements were taken during a period of three years, and the growth of the two sides was found to be equal, whereas Mr. P. Lockhart Mummery observed a case for two years and found the large side growing faster than the other. A further point of interest in the first case was that the temperature in the left axilla (larger side) was found

Fig. 3.—Congenital asymmetry.

to be 1° F. higher than in the right axilla after several weeks of careful observation.

The anomaly is quite correctly described as unilateral hypertrophy, but there are frequently minor disturbances of growth on the other side. The discoloration of the skin, capillary nævi and varices are rarely one-sided, and some part or organ of the small side may show hypertrophy—the disturbance of growth, in other words, is to some small extent bilateral. In another case (Fig. 3) which I recorded

I suggested that possibly there was overgrowth on one side and defective growth on the other. The point, of course, turns on the standard size for one side at a certain age, which obviously is a very uncertain criterion to go on. Very few cases of unilateral microsomia have been recorded, and of course it is possible that the two conditions might be combined. Crossed hypertrophies of varying degree also occur.

The cause of these anomalies will probably remain unknown like that of many tumours, etc., but as to the time of their origin there is good reason for thinking that it must be in the germinal period, and certainly not later than the embryonic period. The theories which attributed the result to the nervous system, trophic influences, blood supply, etc., are, there is little doubt, erroneous. It seems more as if the forces which control symmetry had ceased to act normally, and that a deformed leaf, flower, fruit or even crystal have an analogous basis in their origin.

Those interested in the subject should consult Dr. J. W. Ballantyne's book and the recent paper by Dr. H. R. Caston, which contains a fairly complete bibliography.

Congenital Overgrowth of the Right Leg.

The patient, male, aged 18 years, was in the R.A.V.C. and admitted to the Brook War Hospital suffering from D.A.H.

The following measurements were made:

Right leg from the anterior superior spine of ilium to tip of the external malleolus	37¼ in.
Left leg from the anterior superior spine of ilium to tip of the external malleolus	35½ „
Right leg, circumference in the middle third of thigh .	15 „
Left „ „ „ „ „ . .	15½ „
Right „ „ of calf	10¼ „
Left „ „ „	10¼ „

It will be noticed that the right leg was 1¾ in. longer, but did not show so good muscular development as the left. This may have been due to the extra strain thrown on the muscles of the left thigh through the tilting of the pelvis. The deviation of the spine to the left and the obliquity of the pelvis are well shown in Figs. 4 and 5. The foot and toes on the right side were rather larger, but the actual measurements are not recorded. The left side of the face and left ear were slightly smaller. No appreciable difference was made out in the size of the arms or hands. The disproportion in the length of

the two legs was noticed at birth, and is stated to have increased with age.

This case appears to be closely allied to the previous one, except that the overgrowth of one side remained incomplete.

Heredity.—The family consisted of four sons who were all normal in development except the patient. The chief point of interest, however, in this case was that the father showed a similar anomaly and of about the same degree. As far as I am aware in all recorded

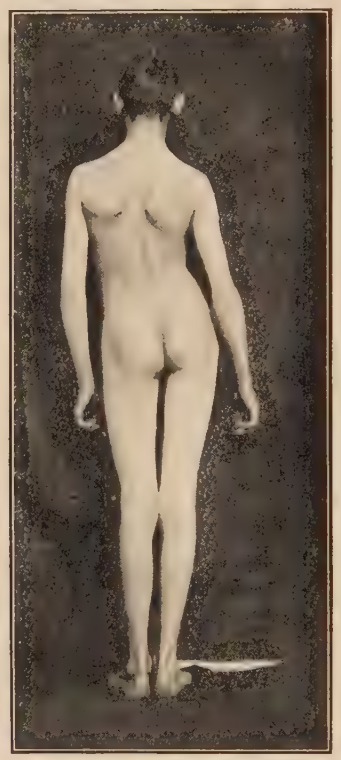

Fig. 4. Fig. 5.

Congenital overgrowth of right leg.

cases of hemihypertrophy no heredity has been traced. It would be interesting to know if any adult showing one-sided hypertrophy has had children, and, if so, were they all of symmetrical development.

I am indebted to Lieut.-Col. J. B. Byles, R.A.M.C., for permission to give a record of these two cases.

References.

Ballantyne, J. W.—'Antenatal Pathology and Hygiene,' "The Embryo."

Black-Milne, J.—"On the Case of a Child Affected with Congenital Asymmetry of the Two Halves of the Body," 'Quart. Med. Journ.,' 1895, iii, p. 243.

Coston, H. R.—"Congenital Hemihypertrophia Totalis," 'Med. Record,' 1920, xcvii, p. 222.

Dunlop, G. H. M.—"Hemihypertrophy," 'Trans. Med.-Chir. Soc. Edin.,' 1901–2, xxi, p. 245.

Gordinier, H. C.—"A Case of Unilateral Hypertrophy of the whole Left Side with Autopsy," 'Albany Med. Ann.,' 1918, xxxix, p. 47.

Hutchison, R.—"A Case of Hemihypertrophy in which the Internal Organs were Affected," 'Rep. Soc. Study Dis. Child.,' 1903–4, iv, p. 145.

Idem.—"A Case of Hemihypertrophy with Post-mortem Examination," British Journal of Children's Diseases, 1916, xiii, p. 233.

Mummery, P. L.—"A Case of Hemihypertrophy," 'Proc. Roy. Soc. Med. Lond.,' 1907–8, i (Clinical Section), p. 61.

UNILATERAL DWARFISM OF LIMBS CONNECTED WITH CONGENITAL MULTIPLE CHONDROMATA.*

By F. Parkes Weber, M.A., M.D., F.R.C.P.Lond.

It is not generally recognised that the presence of congenital chondromata in long bones may be in some way causally connected with dwarfism of the affected limbs. The patient, V. K—, aged 13 years, is a healthy boy, whose only abnormality on ordinary examination is that his right limbs are too short and somewhat deformed (Fig. 1).

The measurements are as follows: Arms, from acromion to tip of the styloid process of the radius: On the right side, 35 cm.; on the left side, 45 cm. Legs, from the great trochanter to tip of the external malleolus: On the right side, 50 cm.; on the left side, 67 cm.

The accompanying illustrations (Fig. 2 and 3) are from skiagrams taken in January, 1920, and show the presence of a large chondroma at the lower end of the right tibia and of chondromata in the right ulna and right radius. There is a curious bending of the right fibula, doubtless due to pressure from the tibial chondroma.

There is no history of any similar condition in the patient's family. According to the mother nothing abnormal was noticed on his birth, excepting a peculiar mottling of the skin of the right upper and lower extremities. The shortening of the right limbs

* The case was shown at the Clinical Section of the Royal Society of Medicine on February the 13th, 1920.

was not observed until the boy was $1\frac{1}{2}$ years old. One or two orthopædic operations have, I believe, been attempted. In January, 1920, the boy fell and fractured his right forearm. I am indebted for the case to my surgical colleague, Mr. A. Compton.

An almost exactly similar case in a boy, aged 6 years, was

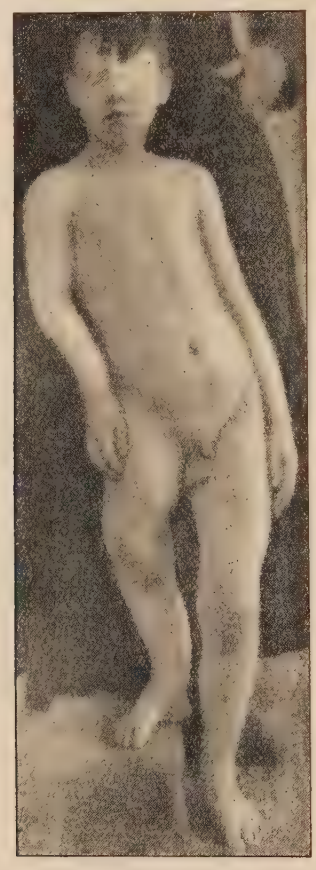

Fig. 1.—Photograph of the patient (1920) to show the dwarfism and deformity of the right limbs.

recently shown by J. E. Adams at the Section for the Study of Disease in Children as a "Case of Shortening of the Limbs on One Side of the Body"*; another case, in some respects resembling the present one, was shown by Cameron and Trethowan at the same Section of this Society on April the 26th, 1918.† Recently also Clemens described the case of a woman, aged 36 years, with

* 'Proc. Roy. Soc. Med.,' 1918–19, xii, Sect. Study Dis. Child., pp. 5–8.
† Cameron and Trethowan, *ibid.*, 1917–18, xi, pp. 45–49.

dwarfism, in whom he thought that the deficiency in height was

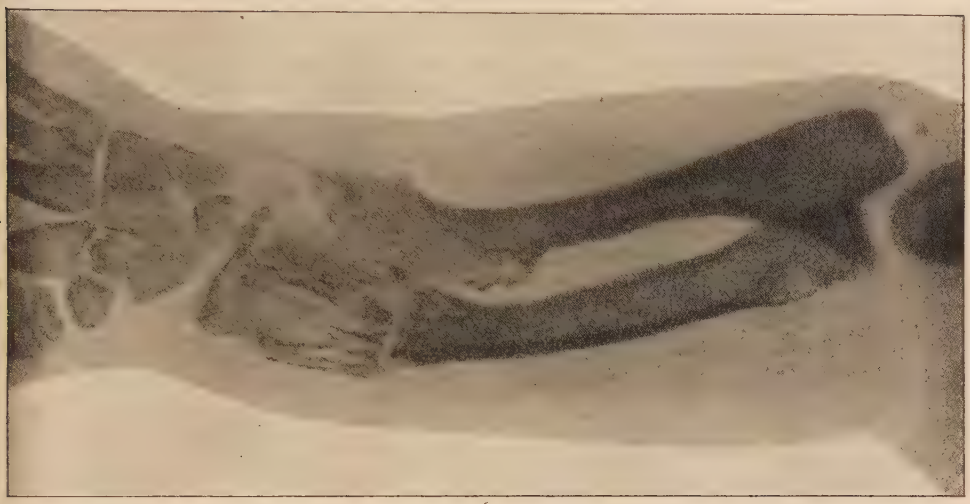

Fig. 2.—Röntgen skiagram (1920) of the right forearm to show the chondromata at the distal ends of the radius and ulna; there is also a smaller one near the proximal end of the radius.

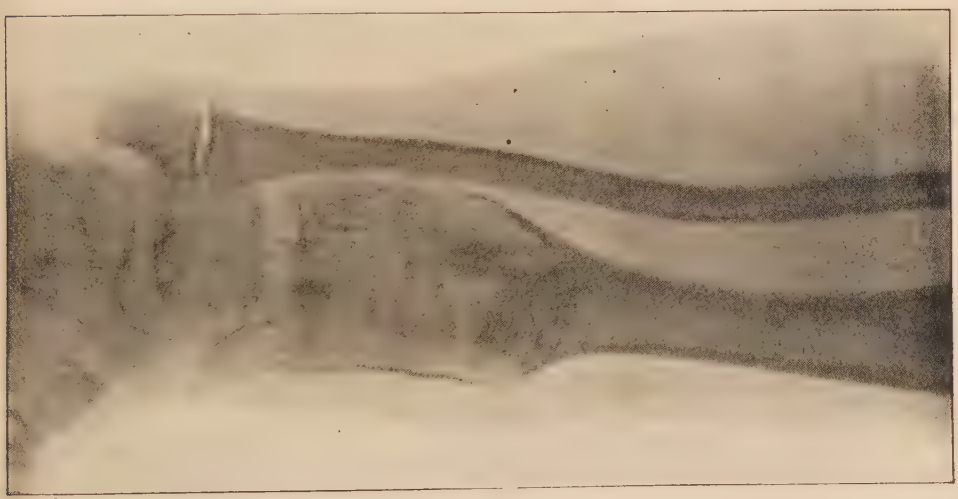

Fig. 3.—Röntgen skiagram (1920) of the distal portion of the right leg to show the large chondroma at the lower end of the tibia.

connected, not with rickets or achondroplasia, but with the presence of multiple chondromata.*

* Clemens. "Multiple Ekchondrosen bei Zwergwuchs," 'Med. Gesellschaft zu Chemnitz,' May the 14th, 1919; abstract in 'Münch. med. Woch.,' 1919, lxvi, p. 1093.

A RETROSPECT OF OTOLOGY, 1919.

By Macleod Yearsley, F.R.C.S.

Although the war is now over, it is evident that professional literature has not yet completely recovered from its effect. There have, however, been several useful papers upon pædiatric otology during the past year, of which the following have been selected for notice:

Calabresi ('L'Ospedale Maggiore,' February the 28th, 1919) described an interesting case in a child, aged 3 years, of a primary fibro-myxo-angio-epithelioma of the middle ear. The chief symptom was hæmorrhage from the ear, and the case was at first mistaken for one of otitis media with granulations. But the child grew rapidly worse, facial paralysis and a large mastoid swelling occurring. A radical mastoid operation was performed, but repeated removals became necessary and the child died cachectic. The author suggested that the growth arose from the embryonic myxomatous tissue that fills the middle ear at birth.

Pugnat ('Rev. de Laryngol., d'Otol., et de Rhinol.,' August the 15th, 1919) published an interesting paper on primary diphtheria of the middle ear. He believes the Eustachian tube to be the route of infection and discounts any suggestion of hæmatogenous infection. Prognosis rests absolutely on early diagnosis, because an early injection of serum usually ensures the subsequent integrity of hearing.

Fournier (*ibid.*, April the 15th, 1919) described an instance of congenital fistula of the ear, commencing at the attachment of the helix and running down through the parotid to the angle of the jaw, where it opened. There was a history of occasional abscesses.

The question of *meningitis* in its otitic connection is an important one and two valuable papers have appeared upon it. The first of these was Sir H. Rolleston's lectures on cerebro-spinal fever ('Lancet,' 1919, i, pp. 541, 593 and 645). In these he makes the following observations upon nerve-deafness: It is less common than formerly. Deafness may be due also to otitis media, which is not regarded as a common complication of cerebro-spinal fever. Reference is also made to the use of nasal douching with 1 in 1000 permanganate of potash or spraying with dichloramine-T as a prophylactic, and the similar local treatment of carriers.

Aboulker ('Rev. de Laryngol., etc.,' May the 31st, 1919) publishes his deductions as to the best line of treatment in otitic meningitis,

from a series of sixteen cases. In *septic meningitis,* if confirmed after the mastoid operation, incision of meninges by the mastoid route, counter-openings in the temporal and suboccipital regions with incision of meninges, and intrathecal injections of electrargol. If confirmed before operation the procedure is the same, except that the radical mastoid operation is performed first. In *aseptic meningitis,* if confirmed after mastoid operation, exposure of dura, repeated lumbar puncture with examination of the cerebro-spinal fluid. Confirmed before mastoid operation, this operation is done first. If it be meningitis with extension, exposure of dura with lumbar puncture is advised if it be benign and transient; when persistent, exposure of dura by transmastoid route without incision. Temporal or suboccipital trephining, incision of meninges, and exploratory punctures.

In connection with meningitis, attention may be drawn to a paper by Regan ('Amer. Journ. Med. Sci.,' January, 1919), on the anatomical points determining the direction of the needle and the proper route for lumbar puncture in children and adults. In children the needle should be introduced directly perpendicular to the spine and exactly in the middle line.

Guthrie ('Lancet,' 1919, ii, p. 429) has published a useful little paper on aural suppuration in early childhood, its prevention and treatment. It is specially to be commended for its preventive tone. Measles and adenoids are, he considers, the two principal causes of aural suppuration in young children. His scheme of treatment embraces (1) cleansing and antisepsis, which will cure the majority of cases; (2) removal of adenoids; (3) the conservative operation (modified radical), in order to conserve the hearing; (4) the radical operation, which is very seldom indicated in childhood and should only be performed in carefully selected cases.

Stoker ('Lancet,' 1919, ii, p. 200) has suggested the use of bismuth and iodoform in the treatment of chronic suppurative otitis media, especially in cases where the bony tympanum is carious. The technique of his method is: (1) Establishment and maintenance of thorough drainage; (2) removal of dead epithelium, etc., by hydrogen peroxide; (3) thorough cleansing of meatus and tympanum with spirit, swabbed on and allowed to dry; (4) covering with insufflations of bismuth and iodoform. In mild cases one, and in profuse cases three applications weekly will suffice.

Lastly, Catherine Lewis ('Lancet,' 1919, ii, p. 830) has published a most interesting case of chloroma simulating mastoid disease in a

male child, aged 10 years. There are records of sixty-five cases of this growth in the literature. It has been variously regarded as a carcinoma, a sarcoma, and a variety of lymphatic leukæmia. In no case, however, that we know of, has its onset resembled mastoiditis, although frequently head symptoms are the first indication.

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, November the 28th, 1919.

The President, Mr. J. P. Lockhart-Mummery, *in the Chair.*

Chronic Jaundice: Congenital Defect of the Bile-ducts.—Dr. Edmund Cautley.—Male, eighth child, born on February the 13th, at full time and apparently healthy. Jaundice appeared on fourth day and had persisted.

The patient was in hospital from April the 4th to the 12th and from September the 18th to November the 23rd. At first he was breast-fed, well nourished, 9½ lb. in weight, jaundiced, and presented acholia, bilinuria and a large liver. The degree of jaundice varied. He was readmitted with temperature 103° F., falling to normal next day. He weighed 13 lb. There was a history of diarrhœa and vomiting for two days, but neither symptom occurred after admission. Jaundice was still present, but had been clearing up recently. The liver was large and hard, and the spleen enlarged.

During his stay in hospital he had a variable degree of fever, due to bronchial catarrh. Acholia and bilinuria had been persistent, and the weight had varied from time to time, according to the amount of catarrh and his appetite for food, which consisted of milk and water, with Horlick's malted milk and Benger's food. The liver had decreased somewhat in size and become harder and irregular, and the spleen had got larger and harder. The Wassermann reaction was negative.

The case was interesting from the point of view of diagnosis and the duration of life. Dr. Cautley was disinclined to think it one of cholangitis, in view of the absence of febrile disturbance in the early stages. On the other hand, most cases of congenital obliteration of the bile-ducts only lived six to eight weeks. Life was, however, sometimes prolonged for eight or nine months. Dr. Kenneth Kellie showed a patient of this type in 1911, a male baby, aged 5 months, who died subsequently at 7 months of age, and had a large, smooth, green liver, a hard spleen, a rudimentary gall-bladder and a common bile-duct represented by a fine cord. Slight jaundice had been present since the fourth day of life. It was curious that the jaundice was slight and variable in degree in some of these patients.

Specimens from Four Cases of Punctate Ulceration on the Stomach in Infants.—Dr. Eric Pritchard and Dr. W. T. Hillier.—The specimens were all taken from cases of young infants who died of a peculiar form of gastritis occurring in cases in the wards of the Queen's

Hospital for Children; they showed numerous and very minute ulceration; excessive vomiting was characteristic of all the cases, and in most of them blood-stained mucus was present in the vomit. Similar ulcerations of a follicular character were also found in the intestines.

Specimens from a Case of Hypertrophic Pyloric Stenosis with Associated Hypertrophies.—Dr. Eric Pritchard and Dr. W. T. Hillier.—The specimens were taken from a baby aged 3 months, who died of hypostatic pneumonia; they showed great hypertrophy of the lower end of the œsophagus, of the pylorus, and of the ileo-cæcal sphincter. At the cardiac orifice there was a polypus-like growth of mucous membrane about the size of a small pea. The stomach *intra vitam* had a capacity of about 4 oz. The transverse colon opposite to the greater curvature of the stomach was dilated.

Macroscopically the adrenals were normal.

The interest of this case lay in the association of hypertrophies at three points in the alimentary canal, which it had been suggested might be dependent on overaction of the adrenals either before birth or after, or on want of compensation by antagonistic secretions.

Tuberculosis of the Heart.—Dr. T. H. Gunewardene.—The tuberculous focus was situated in the wall of the left auricle, and had invaded the mouths of the pulmonary veins, the interauricular septum and the rings of the auriculo-ventricular orifices. There were areas of caseation, and tubercle bacilli had been shown to be present. The lesion was apparently primary, and no tuberculosis was found elsewhere in the body. The history was of two months' duration, and the signs during life were those of hypertrophy and dilatation merely; no bruits were heard. Of forty-one cases of tuberculosis of the heart which he had seen records of only one had so extensive a lesion.

Cirrhosis of the Liver.—Dr. R. C. Jewesbury showed a case of cirrhosis of the liver in a boy, aged 4½ years. He had been well until 2½ years old, when jaundice appeared, and was followed by abdominal swelling. The jaundice lasted only a few days. There had been attacks of epistaxis, but no other hæmorrhage, and vomiting had been occasional only. The liver was very large, hard and irregular; the spleen reached to the level of the umbilicus. The fingers and toes were clubbed. Only a faint variable systolic murmur was heard. The mother had confessed to giving the child a teaspoonful of gin in hot water occasionally for three and a-half years. The Wassermann reaction was negative. The blood examination showed considerable anæmia, a colour index of 1, and 2200 white blood-corpuscles per c.mm. The diagnosis of alcoholic cirrhosis was suggested.

Isolated Scaphoid Disease.—Dr. Cockayne showed skiagrams of a case of isolated scaphoid disease (Köhler's disease). The patient was a cretin, aged 4½ years, who had complained of pain in the left foot and had limped for a year. Recently the foot had become more painful. There was some tenderness over the scaphoid region. The skiagram showed the left scaphoid bone to be small, narrow, dense and irregular, and to project on to the surface. There was no evidence of tubercle.

Friday, January the 23rd, 1920.

The President, Mr. J. P. Lockhart-Mummery, *in the Chair.*

Œsophagectasis in an Infant.—Dr. F. Langmead.—The patient, a girl infant, was born at full term by a normal labour. She was a very small baby weighing no more than 4 lb. at birth. Shortly after birth it was noticed that "something was wrong with her stomach." On the first day she retched and "vomited," even before her first feed. She was breast fed for one week, during which time she "vomited" occasionally and her stools were green. At one week she was weaned and put on cow's milk and water. She was now constipated, but the "vomiting" continued; it occurred about an hour after food, was not projectile, and was often brought on by change in posture. At 4 months she was wasted and weighed "no more than 3 or 4 lb." Afterwards the "vomiting" was not so frequent and occasional feeds were retained. The constipation continued, hard small stools being passed. After her feeds she used to be very quiet, pale, and "collapsed," but recovered, and the colour returned after "vomiting." She slowly gained weight, and reached 14 lb. 5 oz. at a year and three months old, one month before admission. For three or four months before admission the "vomiting" followed immediately after or coincided with a meal, and the food "did not seem to enter the stomach at times." The vomit was unaltered milk, sometimes accompanied by mucus. The father and mother were both healthy, and there was no history of neurasthenia or neuroses on either side of the family. The patient was a third child in a family of three, the elder members being quite well. No miscarriages. On admission to hospital on November the 28th, 1919, the child was found to be fairly well developed and nourished, but with a pale face, slightly sunken eyes, and hanging folds of skin, indicating recent loss of fat. The fontanelle was slightly depressed. There were no signs of rickets. Examination of the abdomen revealed no tumour or gastric peristalsis. Heart and lungs were apparently normal. The knee-jerks were very exalted, otherwise there were no abnormal nervous phenomena. The urine contained acetone in definite amounts. After admission the child cried incessantly, apparently without pain. A stomach-tube was passed but no food washed out. During the first twenty-four hours the child refused all food and was fed by a tube; she "vomited" afterwards. Next day she took equal parts of milk and water a little better, but cried almost continuously if not nursed or petted. A single vomit contained mucus; the milk was not digested and contained no curd. On December the 4th, six days after admission, X-ray examination was made after a bismuth meal. Three screenings were done—one immediately after the meal, one an hour later, and the last three hours later. A dilatation of the œsophagus was detected near its lower end, centrally placed, and about the size of a hen's egg. Immediately after the meal most of it was seen to be retained in the œsophageal sac, but some had passed on into the stomach. The second and third screenings showed that part of the meal was still retained. There was no obstruction in the alimentary track below the cardia. As the result of this examination an attempt was made to pass a stomach-tube twice a day with a view to introducing food and dilating the cardia. This appeared to be successful, but there was some doubt whether the tube curled up in the sac or traversed the cardiac opening. The vomiting was now less, but only 6 oz. could be held, the rest flowing back. To

elucidate this point an opaque tube was passed under X rays, and it was found that the tube, $\frac{1}{2}$ in. in diameter, would not pass through the cardia, but curled back into the sac on reaching the lower end. Since the child was losing weight and a tube could not be passed, Mr. O. Addison saw her with a view to surgical treatment. The œsophagus was examined with an œsophagoscope, which passed freely into the stomach under an anæsthetic, and revealed no organic cause for the retention of food in the gullet. No operation was considered advisable. The case appeared to be one of œsophagectasis due to want of relaxation of the cardiac sphincter dating from birth, and to be similar to the examples of greatly dilated œsophagus recorded in adults. The absence of cough and dyspnœa, such as occurred in adults, could be explained by the relatively small degree of dilatation. There was probably a close analogy between this condition and that of pyloric spasm, and it would appear that it bore the same relationship to hypertrophic stenosis of the cardia that pyloric spasm did to hypertrophic stenosis of the pylorus.

Cirrhosis of the Liver in a Child.—Dr. R. C. Jewesbury showed the liver of a case of cirrhosis in a child previously exhibited before the Section and ascribed to alcohol. The cirrhosis was of the usual multilobular form, but the nodulation of the surface was not pronounced, and large areas were smooth.

Sclerodactylia with Raynaud's Phenomena and Necrosis of Nasal Bones.—Dr. E. A. Cockayne.—The patient was a boy, aged 1 year and 2 months, who appeared normal up to the age of 3 weeks. At this age a bluish area appeared on the left hand, which was swollen. According to the mother, the centre of this came out as a "core." Shortly after this the child had an attack of diarrhœa and sickness. At 10 weeks there was a greenish-yellow offensive discharge from the nose, which had continued on and off ever since. The child was seen first at the age of 5 months. The bridge of the nose was very depressed and there was an offensive discharge. The fingers were blue and cold, with small septic areas on them, and the nails were deformed, and continued in that condition all through the summer. The child was fairly well nourished, but very susceptible to cold. There was a swollen red area just in front of the right ear, and a blue cold area with a necrosed centre in the middle of the cheek. The hands were blue and cold, and the child gave evidence of a good deal of pain in them. The fingers were thin, the skin blue and glossy, the nails deformed. Over the finger-tips and nails there was much dry, thickened epithelium. There was limitation of passive and active movements at the interphalangeal joints. The legs showed a blue mottling, and there were small scars on both legs. The toes were normal, but cold and blue. While under observation the finger-tips had been almost black on two occasions, and on the dorsum of the left hand there had been a blue area with a dark centre of necrosed tissue. The Wassermann reaction in both mother and child proved negative on two occasions in April and in July, 1919.

Polioencephalitis affecting the Midbrain.—Dr. F. J. Poynton.—The patient, a girl, aged 10 years, was a healthy, active child before the onset of the illness. The first symptoms arose in July, 1919, when she lost the use of her right arm. Later in the day her face became affected, and appeared "to be twisted to the right." The child's mother stated that

there was no accompanying loss of consciousness, vomiting, or signs of an acute feverish condition, and that she complained only of slight headache and loss of appetite. During the next few days she lost the use of her right leg, left leg, and left arm in turn, and her speech became affected. Within a week of the onset of the symptoms she was confined to bed, unable to move her limbs, which were stiff and rigid, and spoke only in almost unintelligible monosyllables. She was very quiet and depressed, though subject to frequent emotional outbursts. She lay in this condition for a month before any change appeared. This was first seen in improvement in her speech and in return of the power to use her left arm, and was progressive up to her admission to hospital in October. On admission she showed spastic paralysis of the right arm and leg. The arm was in a position of flexor rigidity, and there was a coarse tremor of the right hand. The tremor, absent during sleep, or when the body was in a position of rest, was immediately brought into play by any emotional disturbance, attempt to speak, or carry out any muscular effort. On the left side the arm could be moved, but the movements were wildly ataxic; the leg was rigid, but there was slight movement at the hip- and knee-joints. Speech was slow, stuttering and hesitating. There was no squint or ptosis. The pupils were equal, reacting normally to light and accommodation. The face was expressionless, and when the child was emotionally disturbed the loss of expression became more marked on the right side; but there was no true facial nerve paralysis. The right plantar reflex gave an extensor response, and there was an increased knee-jerk and ankle clonus on the right side. The left plantar reflex gave a more indefinite extensor response, difficult to elicit. There was no ankle clonus on the left side; the left knee-jerk was increased. No changes in sensation were detected. The fundi were normal. The cerebro-spinal fluid was clear, sterile, and without any increase in cells or albumin content. The Wassermann reaction was negative. No abnormal physical signs could be detected in the heart or lungs. The urine was normal. During the past two months the clinical picture had changed a little. While the right hemiplegia had persisted unaltered except for a slight return of movement in the right leg and right arm, there had been distinct improvement in the tremor of the right hand, the ataxia of the left arm, the speech, and the control of the emotions. The ataxia, which on admission was very wild, had almost disappeared. She was no longer subject to the sudden and inexplicable emotional changes. A careful look-out had been kept for any signs of ocular paralysis. In December there was slight inequality of the pupils for about two weeks. During the past three weeks there had been a fine lateral nystagmus, but there had been no signs of third, fourth or sixth nerve involvement.

Friday, March the 26th, 1920.

Rheumatoid Arthritis with Nodules.—Dr. D. H. Paterson.—The patient was a girl, aged 8 years. She had swollen joints and stiffness of the neck, which had come on gradually and had been present for 12 months. She was the third child of the family. The father was alive and well except for bronchitis, aged 46. The mother alive and well, aged 35. She had one brother aged 3 years, and four sisters alive and well, aged 10, 7, 5 and 1 year respectively. One died at 4 days after a difficult labour. There were

3 miscarriages distributed among the other pregnancies. The patient was a full-term child, born by normal labour. She was breast-fed for 3 months, then with cow's milk and water, half and half. She cut her first tooth at 6 months, sat up at 9 months, walked at 13 months, talked at 14 months. The family of eight lived in two rooms at the top of the house on high ground, but the rooms were damp. The patient had had whooping-cough at 3 years, scarlet fever at 4 years, and chickenpox at 5 years. It was first noticed that the wrists were swelling about 12 months ago. On admission to hospital there were definite nodules on her elbows and painful wrists and ankles noted at the time. There was no heart lesion. Because of the nodules she was thought to have acute rheumatism at that time. She was however, discharged with a large nodule on her right elbow as she showed no other symptom of acute rheumatism. Practically all the joints of her body had been affected since this time. She had never been quite free or fit. It was only a week before admission that her neck became affected. On re-admission she was seen to be a rather thin, hollow-eyed child with auburn hair. Both wrists were thickened and the backs of the hands were swollen, with atrophy of the interossei. There was a large nodule on the left elbow as well. The epitrochlear glands were enlarged on both sides and there were shotty glands along the posterior border of the sternomastoid muscle on the right side also. The neck was stiff and sore when moved. The other joints did not seem involved. The heart was regular. There were no bruits, and the cardiac dulness was not increased. The chest was rather flat. Percussion note was resonant throughout. Breath-sounds were vesicular. Tongue clean; Teeth good. The tonsils had been removed. Abdomen well formed. Liver and spleen were not palpable. No areas of rigidity or tenderness. The pupils reacted to light and accommodation. The abdominal reflex and knee-jerks were present. Plantars flexor. Temperature had been normal since admission. Occasionally got pain in her wrists.

Case of Hemi-hypertrophy.—Dr. H. H. Chodak Gregory.—A girl, aged 2½ years, with marked asymmetry of the body and limbs. The condition was noticed at birth, and the mother thought that there was no more disproportion now than there was then. The father and mother were normal and the other children were said to be symmetrically developed. The left leg and foot, the left arm and hand, the left side of the abdomen, chest and tongue were all obviously larger than the right. On the other hand the right side of the head was slightly larger than the left. The size (compared with other children of the same age) and the shapeliness of the right side seemed to indicate that this was the normal side, and that the left was abnormally developed. The actual measurements were: Arm—acromial process to end of thumb, right 11½ in., left 13½ in.; circumference, middle of upper arm, right 6 in., left 7 in. Leg—anterior superior spine to internal malleolus, right 14¼ in., left 15¼ in.; circumference, middle of thigh, right 10 in., left 11½ in. Abdomen—spine to umbilicus, right 10 in., left 11¼ in. Thorax—spine to mid-sternum, right 9½ in., left 11 in. Skull—greatest semicircumference, right 6½ in., left 5½ in. The tongue had not been measured, but it was obviously considerably larger on the left than on the right side; the left side of the face was also a little bigger.

Anæmia with Splenomegaly.—Dr. D. H. Paterson.—A male child, aged 4 months. A swelling had been noticed in the abdomen for a

fortnight. Since the age of two weeks he had been losing weight, and had always been pale. For two weeks before admission there had been loose green stools. Cardio-vascular and respiratory systems were apparently normal. The left flank was occupied by a large mass, which seemed to be the spleen, and which extended forwards to within an inch of the umbilicus and reached to the pelvic brim. The liver was also large, reaching $1\frac{1}{2}$ fingers' breadths below the costal margin at the ninth rib. Lymphatic glands were not large. The stools and urine were now normal. A blood examination showed red blood-cells, 3,440,000; white cells, 18,000; hæmoglobin, 30 per cent.; colour index, 0·4. Differential count: polymorphs, 29 per cent.; small lymphocytes, 35 per cent.; large lymphocytes, 16 per cent.; transitionals, 1 per cent.; neutrophilic myelocytes, 12 per cent.; basophilic myelocytes, 3 per cent.; normoblasts, 2 per cent.; and megaloblasts, 12 per cent. Polychromatophilia was present. The Wassermann reaction was negative. The case was regarded as one of v. Jaksch's anæmia.

Splenomegaly.—Dr. D. H. Paterson.—The patient was a girl aged 5 years. She was somewhat pale and puffy, with flabby muscles and slight enlargement of the spleen and liver. The lymphatic glands were not enlarged. The girl was prone to "dirt-eating." On admission the red corpuscles numbered 3,680,000 and white corpuscles 7200, of which polymorphs were 46 per cent.; small lymphocytes, 32 per cent.; large lymphocytes, 19 per cent.; large mononuclears, 2 per cent.; and myelocytes, 1 per cent. The hæmoglobin was 32 per cent. and colour index 0·4. A week later the spleen was noted to be larger. The red blood-cells had diminished by about 1,000,000 and the hæmoglobin by 7 per cent., while the white cells had increased to 14,000. The differential count remained approximately the same, but the myelocytes had increased to 3 per cent. and 4 per cent. nucleated red cells were noted. The Wassermann reaction was negative. The view was expressed that possibly the case was an example of a late stage of recovering splenic anæmia of the infantile type (v. Jaksch's anæmia).

CLINICAL SECTION.

February the 13th, 1920.

Unilateral Dwarfism of Limbs connected with Congenital Chondromata.—Dr. F. Parkes Weber (*vide* p. 85).

Malignant Endocarditis affecting the Pulmonary Valve.—Dr. H. Batty Shaw showed a youth, aged $16\frac{1}{2}$ years, who had been troubled with "heart complaint" for $2\frac{1}{2}$ years, his symptoms being palpitation and shortness of breath on effort. Previous to that he had had no illness of any kind. He was admitted to hospital with the history that he had developed pain over the heart during the previous four days. While in hospital he had fever of a remittent and intermittent character almost continuously, the maximum being 104° F., the pulse varied from normal to 120, and the respirations from 24 to 30. He had always been of pale complexion, and during his stay in hospital had steadily lost weight and was now $2\frac{1}{2}$ st. under weight. Blood examination showed secondary anæmia

and 5500 leucocytes per c.mm., the polymorphonuclears numbering 75 per cent.; cultures from the blood showed a *Streptococcus longus*. The spleen was enlarged and tender; blood had been found in the urine on one occasion, and there were pain and some *râles* in the right axilla. A loud systolic murmur was heard over the pulmonary area, and there was a distinct systolic thrill conducted towards the left clavicle. From the facts that the cardiac symptoms had only been noted during the last $2\frac{1}{2}$ years and that there was no cyanosis or clubbing of the fingers, the conclusion was drawn that the narrowing of the entrance of the pulmonary artery was due to malignant endocarditis of the valves, and that the case was not one of malignant endocarditis developing on valves damaged by congenital heart disease.

SECTION OF LARYNGOLOGY.

December the 5th, 1919.

Supernumerary Nostril and Cavity.—Mr. H. Bell Tawse showed a female child, aged 16 months—one of twins; the other was anencephalous, and died at birth. The patient presented a supernumerary nostril and nasal cavity on the right side. The cavity led up to the root of the nose, and on the skin surface corresponding to the termination of the cavity was a dimple, which was said to have discharged watery fluid at times but was now dry. There was profuse discharge of mucus from the cavity, and on probing it blood appeared from the sound and normal nostril lying beneath it, indicating some communication between the two. On touching the eyelids the dimple and supernumerary nostril were seen to contract. Bacteriological examination of the discharge showed *Micrococcus catarrhalis* and diphtheroids. As regards operation there were two alternatives—either to incise the skin from the root of the nose to the lips, excise the supernumerary nostril and the partition between it and the normal one, removing at the same time any dermoid remains, or to throw the two cavities into one by removing the bridge of skin and the partition between them.

Nasopharyngeal Angiofibroma.—Dr. G. W. Dawson showed a boy, aged $13\frac{1}{2}$ years, who had come under his observation in June, 1918, with a tumour which bulged the left cheek, appeared in the pharynx, displacing the soft palate downwards, and presented itself at the left nostril. After a preliminary laryngotomy the tumour was removed by working through the mouth and nostril. He returned to hospital in March, 1919. The tumour had recurred, presenting much the same appearance as when first seen. On April the 5th 90 mgrm. of radium were inserted under the mucous membrane over the left antrum and left for twenty-four hours, and on May the 1st 80 mgrm. were inserted into the post-nasal space and left for twenty hours. No effect occurred beyond causing a scar in the left cheek. The tumour was therefore removed by the external route. Laryngotomy was performed, and an incision made from the angle of the eye along the nose and dividing the upper lip. On reflecting the cheek the whole mass of the tumour came into view, the whole of the external wall of the antrum being absorbed. The floor of the orbit was very thin, and two molars so thin as to be easily plucked out. The tumour was then removed with raspatory and scissors. Recovery was uneventful.

Congenital Occlusion of one Choana.—Dr. J. Dundas Grant showed a little girl who had been brought to him for persistence of nasal obstruction in spite of removal of adenoids. He found the left cavity occupied by a good deal of firm, shiny mucus and complete obstruction of the posterior choana. The obstruction was mainly osseous, and only the central portion appeared to be fibrous. The posterior part of the septum was removed and the obstructing bone was chiselled away till the choana was restored to nearly its normal size. There was no return of the obstruction.

Foreign Body (Mutton-bone) Removed by Crico-tracheotomy from the Larynx of a Boy, aged 10 years.—Dr. Douglas Guthrie.—The patient while eating bread and dripping was suddenly seized with a fit of coughing, and said that something had stuck in his throat. He was brought to hospital next day for pain in the larynx, dyspnœa, hoarseness and stridor. An antero-posterior skiagram showed no foreign body, but a lateral view revealed a shadow in the subglottic region opposite the fifth cervical vertebra. Under suspension laryngoscopy the piece of bone was clearly visible, but a good grip of it could not be secured. Breathing became so embarrassed that tracheotomy was performed, and further attempts to dislodge the bone were deferred till two days later, when the wound was enlarged. It was necessary to divide the cricoid cartilage before removal could be effected. The tracheotomy tube was removed next day, and subsequent recovery was uneventful. In spite of the injury to the cricoid cartilage, the patient was found to be free from any sign of laryngeal stenosis on being examined two years later.

Philadelphia Pediatric Society.

October the 13th, 1919.

Multiple Sarcomatosis.—Dr. Ralph L. Engle.—The patient was a girl, aged $2\frac{1}{4}$ years. The family and past history were entirely negative, the child being born at full term, and developing normally in every way until the present condition, which had begun eight months ago. The first nodules appeared one under each eye. Subsequently nodules appeared on the dorsum of the left hand and the lower left jaw and the cranium. All the nodules with the exception of the last one had broken down, and were now discharging. There had been a severe cough. Appetite good and digestion normal. Examination showed a fairly well nourished female coloured child, and also revealed the nodules mentioned in the history. There was no marked enlargement of the superficial lymph-nodes. X rays showed generalised sarcomatosis involving the skull, in which there were three distinct areas. The chest showed marked infiltration in the right lung, and the nodules in the hand and jaw were visible in the skiagram. The urine was negative. Blood examination showed 3,540,000 red corpuscles, 16,550 leucocytes, and 60 per cent. hæmoglobin; the differential smear showed 70 per cent. polymorphonuclears, 3 per cent. large mononuclears, 19 per cent. lymphocytes and 3 per cent. eosinophils.

Scorbutus in an Infant with Czerny's Exudative Diathesis.—Dr. Howard Childs Carpenter.—The patient, aged 11 months, had had a

cough and had suffered from malnutrition since birth. The infant had been under observation for three months with well-marked scorbutus, the chief symptom of which was marked swelling of both thighs.

The X-ray examination showed an extensive sub-periosteal exudate with marked calcification. In addition to the scorbutus, the infant had a well-marked rachitis, and presented all the classical symptoms of Czerny's exudative diathesis, such as recurrent bronchitis, seborrhœic eczema, miliaria, increased deep reflexes, a persistent rhinorrhœa, general enlargement of the lymphatic glands, including the bronchial, 60 per cent. hæmoglobin, 6 per cent. eosinophilia and a blood sugar of ·11 per cent. There was a high plasma chloride, the blood showing 6·68 grm. per litre. The infant showed a very marked tolerance for belladonna.

Operative Correction of Paralytic Foot Deformity.—Dr. de Forrest P. Willard.—The patient was a girl, aged 9 years, who had had infantile paralysis when six months of age, followed by permanent paralysis of the calf muscles and flexors of the toes with marked deformity of the foot (talipes calcaneo-valgus). Treatment was begun at one year of age. Four years ago the child was operated on and a transverse horizontal section of the tarsus was performed. After this there was a cast and a brace for six months. There had been no treatment since. There was now no lateral deformity of the foot, there was full ankle motion, and the child could walk without a brace.

Tuberculous Pericarditis.—Dr. L. Fernald Foster.—The patient was a seven-year-old coloured boy.

The condition was of six months' duration, beginning with præcordial pain, œdema of extremities and dyspnœa proceeding to orthopnœa. There was no past history of note but a family history of pulmonary tuberculosis in the father with direct contact with the patient.

Four months after the initial symptoms the left chest was flat to percussion from the clavicle to the costal margin and from the anterior axillary line to 5·5 cm. beyond the midsternum on the right. Just below the right clavicle the breath-sounds were of fair intensity; over the rest of the front of chest they were distant or diminished. The heart outline was indistinguishable and its sounds inaudible. The liver was then 10 cm. below the costal margin.

The case one month before presentation showed normal breathing on right side anterior to the sixth interspace. In the seventh, however, was distant bronchial breathing from the right anterior axillary line to the sternum where it extended to the upper left chest, when it was heard best at second interspace. Dry friction-sounds then appeared in the left axilla as far back as the posterior axillary line. The cardiac impulse was then palpable in the 5th interspace just inside of the left nipple line.

On presentation of the case the friction-sounds were heard over the whole left chest and the right chest was full of crepitant *râles*; the upper lobe gave increased vocal resonance, prolonged expiration and fine crepitant *râles*. The right-sided bronchial breathing in the seventh interspace, noted previously, still persisted. The temperature was always irregular, from normal to 101° F.

The chest fluid was inoculated into guinea-pigs, which subsequently developed a mild, nodular type of tuberculosis.

An X-ray plate showed a large shadow in the left chest which reached well past the normal limits of the cardiac shadows, especially on the right.

Double Congenital Equino-varus with Marks of Cord Pressure about both Legs.—Dr. J. Torrance Rugh.—The patient was a girl, aged 4 years, and was sent to the Jefferson Hospital for the correction of club-feet. Examination showed deformity of the third degree, which could not be corrected by the hands nor maintained corrected. No attempts at correction had ever been made in the feet. About $2\frac{1}{2}$ inches above the ankle-joints on each leg there was a deep groove running obliquely around the leg. The groove was about one inch broad and on the left leg was very much deeper than on the right. The nutrition in both feet appeared good, and the child had been walking part of the time on the outer and dorsal surfaces of the feet and part of the time on her knees. There was about 15° of flexion in the knees. Mentally the child was not as far advanced as the ordinary one at her age. Her speech was very poor and indistinct. Her general nutrition was good. In the latter part of July Dr. Rugh did extensive tenotomies about the arches and soles of the feet, partially corrected the deformities and placed the feet in plaster-of-Paris in the corrected position. Two days later the toes were red and swollen and it was necessary to cut the casts. Sloughing of the skin took place in the left foot and there were several local spots of pressure on the right foot. The skin necrosis on the left foot became so extensive that all efforts at correction of the deformity were abandoned. Because of the very marked constriction of the leg from the cord pressure it was felt that correction would be impossible and an amputation was done in the early part of August. Recovery from this was uneventful. The stump was good but there was flexion contraction at the knee. Since that time practically complete correction of the deformity in the foot had been secured by tenotomies and plaster-of-Paris and she was about ready for a walking brace.

Congenital Elevation of the Scapula (Sprengel's Deformity).—Dr. J. Torrance Rugh.—The child was two years of age, and first came to the Methodist Hospital about six months ago because of the inequality of its shoulders. There was no pain nor muscle-spasm; there was some limitation of motion in the anterior direction and the shoulder was on a very much higher level than the opposite one. In the supra-scapular fossa the upper edge of the scapula could be felt bending forward and the postero-superior angle was felt to be fixed to the spine. The X-ray plate showed that the fixation was caused by a piece of bone which was attached to the spine. It also appeared to show a rachischisis of the cervico-dorsal spine. The treatment would consist in the removal of the piece of bone, the separation of the muscles from the upper portion of the scapula, the removal of the upper border of the scapula to allow it to drop downward over the ribs and the fixation of the shoulder as low down on the ribs as possible.

Naso-frontal Meningocele.—Dr. Warren H. Johnston.—The patient was a child, aged 1 year, born of healthy parents at full term. The labour was prolonged and difficult, terminating in a forceps delivery, which left many marks on the child's head. The meningocele was quite black at birth, and was large enough to obscure the nose, only the nasal orifices being visible. The patient had developed normally and satisfactorily. The tumefaction varied in size and was smaller in proportion to the size of the head than it was at birth. It could be greatly reduced by pressure and curiously enough became smaller when the child cried. A few months ago the swelling would almost disappear at times.

It was situated in the naso-frontal region just below the glabella, apparently coming from the naso-frontal junction through the horizontal plate of the ethmoid bone.

There was a communication with the subarachnoid space, because the tumour was transparent and pulsated. There was a curious nipple-like formation at the summit of the swelling, but its location in the middle line of the body precluded a possibility of its being a supernumerary nipple. Although operation would be attended with certain perils, Dr. Johnston advised surgical removal because of the hideous deformity. The pedicle would be tied at the base and a piece of bone (probably tibia) would be placed in the gap to close it effectually.

Suppurating Fasciitis with Extensive Intermuscular Calcification.—Dr. Harry Lowenburg.—He had been unable to formulate a definite diagnosis, as he had never previously seen a similar case and had been unable to find anyone else who had. The term used was descriptive of the pathologic condition. The patient was a seven-year-old male child, who was first seen seven months ago when he came to Dr. Lowenburg complaining of pain in the right thigh. He walked with a slight limp. He had been treated for rheumatism medically and with electricity for three and a-half years. There was tenderness of the right leg and thigh, and some interference with locomotion. Temperature varied between 99° and 101° F. After incision and use of autogenous vaccine the temperature rose to 104° on a few occasions throughout the course of treatment. The circumference of the right thigh was greater than that of the left. The tenderness was deep-seated. Over an area about 5½ in. from the outer aspect of the great trochanter of the femur, on the antero-lateral aspect of the thigh, it was thought that deep-seated fluctuation could be detected. The whole thigh gave a feeling of board-like stiffness, and on deep digital pressure hard nodular areas could be detected. The same condition was noted on the left side as well. The joints and bones appeared normal. There was no palpable evidence of the condition in the upper extremities. The Wassermann reaction and the Von Pirquet test were both negative. The urine was negative. The blood showed 70 per cent. Hb., 4,220,000 red corpuscles, 9800 leucocytes, with 73 per cent. polymorphonuclears. The X-ray report showed ossification of the musculature of both thighs extending upwards over the hips. Osteomyelitis and arthritis were absent. Calcareous deposits were shown around the scapula, in the pelvis and around both innominate bones. These deposits were also present around the right knee, the left knee and down the outer side of the left leg. It would be seen later that the deposits did not involve the muscles, but existed between the muscles.

Over the area mentioned above where there seemed to be fluctuation an incision was made and 5 oz. of thick creamy homogeneous pinkish substance was evacuated. Digital examination discovered gritty calcareous masses which proved to be calcium carbonate. There seemed to be involvement only of the fascia covering the muscles of the fibrous septa separating groups of muscles from each other, but the muscles themselves were not involved. The fluid was free of all organisms. The injected guinea-pig survived. At one time during treatment streptococci and staphylococci were found. The left thigh was also incised and curetted on three occasions.

In discussing the nature of the pathological process, Dr. Lowenburg said that the disease apparently started as a fasciitis which was accompanied by a more or less clear serous exudate. Leucocytic infiltration ensued. Absorption was now slowly inaugurated. Condensation, saturation, super-saturation and precipitation with deposition of lime-salts followed each other in orderly sequence as common physico-chemical phenomena.

Difficult Feeding Problem in an Infant.—Dr. Percival Nicholson. —The case showed the practical application of some principles of value in many difficult feeding cases.

(1) The use of large amounts of fluid to lesson the dehydration present. (2) The administration of a very weak food regardless of its caloric value, until the infant's powers of assimilation were established. (3) The use of relatively high protein feeding, with a gradual increase in the sugar and fat percentages, regulated by the child's digestive tolerance and gain in weight. (4) The use of soy bean gruel as a practical means of giving high protein feeding.

Disease of the Nervous System.—Dr. George Wilson.—The patient, a girl, aged 10 years, was admitted to the Nervous Dispensary of the University Hospital on February the 18th, 1918. At that time her mother said that the child had been nervous for a year and a-half, and that she was becoming unsteady on her feet, tripping and falling frequently. On one occasion she broke her arm. The patient did not have perfect control of the bladder. There was no history of pains, double vision or failing eyesight. The symptoms above related did not follow an acute infectious disease.

The patient was born at full term, and was the youngest of a family of five; the rest of them were healthy. Dr. Wilson examined the child immediately older than the patient, and found her normal. The mother of the patient has never had any miscarriages.

Physical examination: The pupils were equal, regular, and reacted well to light and in convergence. The eye-grounds and fields were normal. There was no nystagmus or speech disturbance, and the ocular and other cranial nerves were intact. The gait was ataxic and Romberg's sign was present. Ataxia was present in the upper extremities. All the deep reflexes were lost. Plantar stimulation produced plantar flexion. There was no Friedreich's toe, and no deformity of the foot.

The spine presented a well-marked kyphosis with slight lateral curvature to the left. Sensation in all its forms was intact. The lungs and heart were normal.

The blood Wassermann was delayed negative by the classical test and weakly positive by the modified method. The blood Wassermann in the mother was negative.

The diagnosis made was Friedreich's ataxia.

Several common physical findings of that disease were absent, *e.g.* the deformities of the toe and foot, nystagmus and a scanning speech. Friedreich's ataxia did not appear in full bloom all at once, and some of the missing signs might appear later.

Another diagnosis to be considered was juvenile tabes; repeated blood examinations and at least one examination of the spinal fluid would help. The patient has never had any pain and did not show an Argyll-Robertson pupil

Multiple Areas of Pigmentation in a Mother and Child.—Dr. Frank Crozer Knowles.—In 1911 he had reported before the American Dermatological Association an unusual case of pigmentation under the title of "Multiple Areas of Pigmentation, attacking chiefly the Trunk, of Eight Years' Duration, in a Girl of twelve years" ('Journ. Cut. Dis.,' 1912, abstracted in the British Journal of Children's Diseases, 1912, ix, p. 281).

A few months ago the patient, now twenty years of age, came to the Skin Clinic of the Pennsylvania Hospital, bringing her child, a boy, aged 3 years. The boy had fully fifty pigmented areas, varying from the palm of the hand to a split-pea in size, involving almost exclusively the trunk. These areas were becoming darker and were now of a yellowish-brown colour, non-elevated and resembling large freckles. The condition had started two and a-half years ago. The child was normal in every other respect.

The skin of both mother and child was fairly dark as they were Italians. Sections from the mother's skin showed that the only pathological change in the darkened areas was an increase in the number and the space occupied by the pigment-cells. There were no other children in the family, and apparently none of the antecedents had had the anomaly.

Abstracts from Current Literature.

Child Welfare.

Some practical points regarding child welfare organisation (*'Edin. Med. Journ.,'* 1917, i, *p.* 367).—**John Thomson,** in a general survey, deals with (1) the classification and organisation of child-welfare agencies; (2) the extreme importance of home visitation in connection with all out-patient work; (3) the staffing of child-welfare organisations; and (4) some child-welfare institutions which urgently require to be organised and developed in Edinburgh, namely—(*a*) children's dispensaries, (*b*) more convalescent accommodation, (*c*) more chronic hospitals or "cripples' homes," (*d*) an infants' hospital, and (*e*) an improved milk supply.

J. Allan.

Pædiatrics and child welfare (*'Edin. Med. Journ.,'* 1917, i, *p.* 361).—**A. Dingwall Fordyce,** recognising that the cause of pædiatrics is but one special branch of the cause of child welfare, epitomises suggestions for the cause as a whole as follows: Care of sick children:—(1) More thorough, systematic training of medical students: (*a*) Centralisation of education control in one hand; (*b*) the institution of a fully-equipped babies' hospital. (2) Greater facilities for efficient treatment: (*a*) the institution of a fully-equipped babies' hospital (as mentioned above); (*b*) special dispensary clinics throughout the city and the provision of safe milk; (*c*) greatly extended convalescent home accommodation. Preventive work among children:—(1) Diffusion of knowledge of the laws of health among parents, and facilities for trained advice and help at home: (*a*) the employment of thoroughly-trained health visitors, and such correlation of the work of various agencies as will render it possible for the number of visitors to the home to be considerably diminished; (*b*) the development of schools for mothers. (2) Greater facilities for retaining

health: (*a*) Improved housing and lighting; (*b*) further development of open spaces, play centres, kindergartens, and day nurseries; (*c*) the provision of a pure milk supply for young children; (*d*) the institution of several small houses for unmarried mothers and their first illegitimate child; more stringent supervision of boarded-out children. (3) The further development of child welfare centres throughout the city, and consequently the extension of medical superintendence from periods of disease and convalescence to times of health. J. Allan.

Two child-welfare schemes (*'Edin. Med. Journ.,'* 1918, i, *p.* 26).—**G. H. G. Dundas** compares the child-welfare scheme in Ramsgate with that in Leith. In Ramsgate, educative methods are in predominance; in Leith, curative. In both boroughs the scheme had as its foundation the Notification of Births Act; the standard of one health visitor to every 500 births a year prevails; uniformity of teaching by members of the staff is emphasised; prenatal work is included in the scheme, as are also nursing mothers and children under five years of age; notified cases of measles and whooping-cough are visited—by the medical officer to the scheme if the case is notified by the mother, and by a health visitor if the case is notified by a doctor. No great hopes are entertained of preventing the spread of measles and whooping-cough by notification and visiting, but great hopes are entertained of preventing sequelæ and deaths. In Ramsgate the scheme is worked by a voluntary agency, but the Leith scheme is wholly municipal.
J. Allan.

Maternity and child-welfare work (*'Lancet,'* 1918, ii, *p.* 1).—**A. Newsholme** deals with some aspects of maternity and child-welfare work. He refers to the infantile mortality in Durham, and discusses the unsatisfactory position in Durham and the causes of the excessive mortality there, and he notes the insanitary conditions calling for reform. The achievement of the sanitary minimum of healthy family life depends, in the first instance, on municipal and district sanitation and reasonably good housing. This implies convenient and labour-saving arrangements for personal and domestic cleanliness and for the storage of food. Among useful measures in welfare work may be mentioned the provision of "home-helps," maternity homes, and child-welfare centres, the proper organisation of nursing facilities, a good service of health visitors, etc. The assistance of non-official voluntary agencies should be welcomed. J. Allan.

Child welfare work in Massachusetts (*'New York Journ. State Med.'* 1919, xix, *p.* 371).—**R. Smith** gives a *résumé* of the efforts at present being made for the conservation of child life in Massachusetts. With a view to enhancing the value of the work in the future he thinks that special attention should be given to the following: (*a*) Better co-ordination of the work of public officials and of local private organisations; (*b*) further development of public health nursing, with especial reference to child welfare in rural communities; and (*c*) constant stimulation by a central committee to keep standards of work high and beyond political control.
J. Allan.

Child-welfare work in South Africa (*'Med. Officer,'* 1920, xxiii, *p.* 203).—**Jasper Anderson** says that owing to the disastrous epidemic of influenza it was possible to consolidate all past public health legislation in one Act

and to appoint a Minister of Health for Cape Town. Notification of births has to be made within six hours, as in this country. In Cape Town, among Europeans 11·5 per cent. of the infant deaths occur on the first day, 22·5 during the first week, and 32 per cent. during the first month—a striking contrast to the figures among the blacks, where the percentage is only 5·2 for the first day, 14·5 for the first week, and 26·6 for the first month, the subsequent high nergo mortality occurring at later periods. In Cape Town the percentage of still- to live-births among Europeans was 4·2, for coloured 6·6. The midwifery service in South Africa is inefficient and deficient, many qualified midwives taking up other work. There are 106 certified midwives and 166 untrained practitioners. Free medical attendance is provided if the midwife gets into difficulties. The midwives are inspected by a woman sanitary inspector. A woman cannot be employed in a factory for four weeks before her confinement or for eight weeks thereafter.

CHRISTOPHER ROLLESTON.

Maternity and child welfare: the protection of motherhood (*'Journ. State Med.,'* 1919, XXVII, *p.* 271).—**F. H. Champneys** considers that antenatal care and the care of childhood cannot be separated from the subject of the protection of motherhood. Increased attention has lately been given to the systematic examination of pregnant women. In the case of the affluent the responsibility rests with the medical attendant, in the case of the poor generally with the midwife. The methods of securing a good service of midwives are discussed.

J. ALLAN.

Motherhood (*'New York State Journ. Med.,'* 1919, XIX, *p.* 177).—**R. W. Lobenstine** emphasises the need of care of expectant mothers. No preventive work is more important in reducing infantile mortality. Could pre-natal care accomplish nothing more than to diminish the large number of still-births and premature births, it yet would be accomplishing enormous good. The three basic evils acting prejudicially on expectant mothers and young children are—(1) ignorance, (2) rum, and (3) ruthless industrialism. Remove the curse of alcohol and other factors, such as poverty, filth, ignorance, syphilis, and tuberculosis will, in a large measure, disappear.

J. ALLAN.

The maternity hospital and ante-natal centres (*'Brit. Med. Journ.,'* 1918, II, *p.* 33).—**C. Berkeley** discusses the agencies concerned with the preservation of the life and health of the pregnant and puerperal mother and her child under the following headings: (1) The workers—midwives, doctors, health visitors, voluntary workers, and the municipal authorities; (2) the pregnant woman herself; (3) the local centres—various associations set up in different parts of the kingdom, of the nature of ante-natal and post-natal maternity centres, child welfare, and baby welcomes, etc.; and (4) the consultative centre, including the maternity hospital (or beds set apart in general hospitals or infirmaries).

J. ALLAN.

Policy and organisation of maternity and child-welfare work (*'Public Health,'* 1920, XXXVIII, *p.* 123).—**Glew Davidson.**—Cases requiring only instruction on the part of the mothers are well provided for under existing arrangement. Treatment must be provided by the local authority, for the matter is too large to be dealt with either by

existing voluntary hospital or at dispensaries. Thus at Bradford 11·64 per cent. of the 1606 infants examined were born in a state of malnutrition, 8·03 per cent. were born prematurely, and 36·55 per cent. were suffering from congenital syphilis. The housing accommodation is wretched, and therefore all ailing infants should be removed to a baby hospital. The existing children's hospitals cater for older children. Clinics should be scattered broadcast throughout the country, and stress should be laid on the preventive side of the work. Gastro-intestinal diseases should be prevented by supplying dried milk instead of the present diluted sewage. One c.c. of a whole milk as it comes from the farms contains 588,300 bacteria, 1 c.c. of dried milk only 2106. Other advantages are that dried tuberculous milk has only very slight powers of causing tuberculosis and that it keeps an indefinite time. CHRISTOPHER ROLLESTON.

Maternity and child welfare in Newcastle (*'Medical Officer,'* 1920, XXIII, *p.* 5).—**H. Kerr** says that the staff consists of twelve health visitors —all of them certified midwives and five of them trained nurses. Three midwives are subsidised by the Corporation, who also pays the fees of doctors called in by midwives. There are seven voluntary infant-welfare centres, three of which are also maternity centres, run at a cost of £750, towards which the Corporation contributes £250. Tea is provided for the mothers and milk for children up to five; advice only is given, but no treatment. The attendance varies from fifteen to fifty. The poorest mothers do not attend. Two day nurseries are also provided, towards which the Corporation contributes £100. More than half the deaths occur in the first month, and half of these are due to prematurity. There is no diminution in this drain upon infant life. In Newcastle the infant mortality rate for 1896–1900 was 179; in 1917, 113; since then there has been a rise. Infantile atrophy, debility and marasmus account for more than one-fifth of the deaths under one year. Some of these are due to maternal venereal disease, others to improper feeding. Dried milk is now distributed at cost price or free by the Corporation, and the results have been gratifying. The importance of good housing is demonstrated by the fact that in single-roomed homes the mortality is 148 per 1000, in three-roomed tenements only 108; again, in a well-to-do ward the mortality was only 45, in a poor one 150. The author concludes his papers by summarising the additional needs of his county borough as follows: (1) Additional health visitors; (2) maternity homes for homeless or baby-hounded mothers; (3) hotel accommodation for nursing mothers; (4) day nursery school; (5) ante-natal, dental and infant clinics; (6) hospital beds; (7) convalescent homes; (8) a whole-time female medical officer.

CHRISTOPHER ROLLESTON.

The nursery school as an administrative problem (*'School Hygiene,'* 1920, XI, *p.* 10).—**C. J. Thomas** describes the ideas of the Board of Education on those institutions which are to cater for the bodily, mental and social training of children between the ages of two and five years. The hours of attendance are 8.30 a.m. to 5 p.m. There must be ample provision for rest, sleep and meals. The schools must be on open-air lines and must be under medical, dental and nursing supervision. Twelve to fifteen feet of floor surface should be provided for each child, and the number of scholars should not exceed forty to fifty children, and should be staffed by a superintendent, an experienced assistant and a probationer. The nursing school

is only required for a small number of children—*i.e.* those whose mothers go out to work and for those who are ill-nourished. Nursing schools can be either voluntary institutions or rate-supported institutions, and in either case they can be separate institutions or attached to existing elementary schools. The superintendent must be a trained teacher. Buildings of the bungalow type with verandahs and a large garden are essential. Bathrooms should be provided, and should be used by each child once a week. As epidemic diseases are so serious among the debilitated children attending nursing schools provision should be made to require the admission of all infected children to hospitals. The question of holidays is another difficulty, and has been solved in one or two instances by the staff taking their scholars away with them. The older girls from adjoining elementary schools should attend for practical instruction in mothercraft.

CHRISTOPHER ROLLESTON.

Nursery schools (*'School Hygiene,'* 1920, XI, *p.* 106).—**G. Hickling.**—So far public health authorities have concentrated their attention on infants and school children, leaving children of intermediate age severely alone at a period when rickets, otorrhœa and adenoids do most harm. The poor have no nurseries or gardens for children. Buildings of one story, cross-ventilated, and with hot-water pipes and guarded coal or gas fires should be provided. The floors should be covered with cork lino. An open-air shelter with low stretcher beds and coverings will be required as a rest room. The infants are taught to dress and wash themselves and to clean their teeth, but not reading, writing or arithmetic. Dancing and singing are encouraged, and puzzles and painting form part of the curriculum. These schools are especially suitable for children suffering from rickets, malnutrition, subacute rheumatism and discharging ears. One of the nurse attendants should be a masseuse. The danger of acquiring infectious diseases at an earlier and more dangerous period is acknowledged. The author concludes by advising the relegation of all children under seven to the nursery schools, and postponing the teaching of reading and writing till the age of seven years.

CHRISTOPHER ROLLESTON.

The social care of the child (*'Journ. State Med.,'* 1919, XXVII, *No.* 10, *p.* 306.)—**Lady Leslie Mackenzie** says that the nation seems at last to have awakened to the fact that children ought normally to grow up into men and women. She comments on the fact that the Notification of Births (Extension) Act of 1915 has made it possible for all local authorities for public health to make what arrangements they see fit for attending to the health of expectant mothers, nursing mothers and children up to five years of age. She reviews the requirements in the highlands and islands of Scotland. Institutions are necessary. All resources must be mobilised: well-trained medical men and women, well-trained midwives and nurses, capable mothers in good homes. There are no true substitutes for mothers, but we must do the best we can to make up for maternal failure. The institutions are doing good work and they will do much more. But a fair-to-middling mother as a nurse is better than the most approved bottle and the most beautiful bassinette.

J. ALLAN.

Exercise in early life (*'Med. Press,'* 1918, I, *p.* 143).—**E. M. Corner** emphasises the importance of sufficient exercise to the young. This exercise should take the form of games of recreation, in which refreshment the brain

participates, rather than the form of a set lesson in the hands of a gymnasium instructor or drill sergeant. These latter modes of exercise are desirable at times, but they should be an addition to, rather than a substitute for, school games. He indicates the rational application of physical exercise for boys and girls, and he points to certain necessary restrictions if such exercise is to be undertaken without injury to health. J. Allan.

Home versus institutional treatment of young children (*'Lancet,'* 1919, i, *p.* 615).—**E. Pritchard,** in an address before the Child Study Society, said that there was a fairly uniform opinion among welfare societies that, splendid as had been the record of institutional treatment, no substitute had been found for the home. From his study of the children of the well-to-do classes he believed that the domination of the nurse had much to do with the mentality of their charges. This has led him to establish training schools for the trusted custodians of the children of the upper classes, and he thought training-schools might well be established for parents also. Examination of children of all classes, from infancy to school age, and of their home surroundings, had convinced him that the most important factor in character formation was the mother, and, in a lesser degree, the father. Housing conditions had much to do with bad training, but good houses did not necessarily make good parents. Some of the best mothers he had met lived under bad housing conditions, and some of the worst under good conditions. He next dealt with the bringing-up of children in an institution, and he concluded by urging that, in the interest of the State, schools for parents were as necessary as schools for mothers.
J. Allan.

Care of crippled children (*'Brit. Med. Journ.,'* 1920, i, *p.* 697).—**G. R. Gridleston** estimates that 10,000 beds are required for crippled children for the whole of England, but several in existing institutions could be utilised. Such accommodation would not be wasted, for 90 per cent. of cripples can be taught remunerative occupations, while of 1001 cripples in Birmingham only 111 were able to earn their living, the remainder having to be totally or partially supported out of the rates. Most of the children treated would be able to return to ordinary schools after a course at hospital schools, but a few would have to be provided with residential institutions. The hospital schools should contain 200 beds, and the staff should consist of two orthopædic surgeons, two house-surgeons, a physiotherapist and masseuses. The wards should face south, the south wall of each ward being replaced by pillars connected by stone canvas roller blinds. Each ward should have an annexe containing nurses' duty room for dressing and nurses' bathing room for cases on frames, a ward kitchen, bathroom and drying room. Wards for infectious cases and recovery rooms for children recently operated on should also be provided. The cost of maintenance of each child at Baschurch is £2 7*s.* 3½*d.*
Christopher Rolleston.

The dull and backward: Is it possible to measure "general ability"? (*'Med. Off.,'* 1918, ii, *p.* 5).—**J. Priestley** thinks that in any estimate of general ability the following factors should be noted: (1) Memory; (2) recollection; (3) interest or curiosity; (4) "scientific imagination"; (5) judgment; (6) a certain quickness of decision and of making up one's mind; (7) a degree of fearlessness or self-reliance in opinion. If

these elements are the main factors of intellectual ability they are all in some degree measurable. Whether it is possible for the cleverest school inspector to make an estimate of a child's general ability after a twenty minutes' conversation is highly doubtful. The success of the testing would depend entirely on a serene atmosphere, and the mental atmosphere of a child is so easily disturbed by the presence of a stranger, and disturbed in such diverse ways, that all results obtained in such surroundings are suspect. But a child's teacher, having intimate converse with it over a period of months, and skilled to watch the manifestations of each separate element of ability as it shows itself in the complex operations of the child's mind, would certainly be able to give a useful opinion. With such guidance, supplemented by his own testing, a school inspector might make a serviceable estimate also.

J. Allan.

Helping the backward child (*'New York State Journ. Med.,'* 1919, xix, *p.* 284).—**F. W. Barrows** points out that while mental defect always connotes backwardness the same is not true of physical defect. He pleads, for systematic school medical inspection. There should be no rivalry between the family doctor and the medical inspector of schools. On the contrary, every doctor should look on medical inspection as a factor in strengthening the influence of our profession throughout the community. He should avail himself of the opportunities for increased service which medical inspection brings to his very door. He should redouble his vigilance in the care of his little patients from infancy, in order to leave less for the medical inspector to discover and report on later on.

J. Allan.

The hygienic training of the school child (*'Lancet,'* 1918, i, *p.* 663).—**H. R. Kenwood** emphasises the need of social and scientific research and the importance of educating the community. He discusses the present position and the aims of training in hygiene. A scheme is formulated. Up to and including Standard III nothing more than the training by object-lessons and corrections is advocated, but in Standards IV and V in addition, the nature and importance of the laws of health should be simply and tellingly impressed in occasional short talks, which will never seek to do more than to produce a particular practical result in training. The ever-present aim would be to train and all efforts would be focussed on that. The ground covered by such a scheme should comprise—(*a*) training in formation of hygienic habits, including presentation of hygienic object-lessons; (*b*) simple statements upon elements of personal and domestic hygiene; (*c*) additional training for elder girls—the training in the duties of keeping the home (including food catering, marketing, and cooking, laundry work, needlework, and care and management of children). The proper training of the teacher must not be overlooked. The author would make it compulsory upon all young females who attend the evening continuation schools to obtain at the same time a knowledge of infant hygiene and mothercraft.

J. Allan.

Teaching and training on hygiene (*'Lancet,'* 1918, i, *p.* 727).—**H. R. Kenwood** says that the training of the health visitor should include elementary physiology, personal and domestic hygiene, applied especially to expectant mothers and children. The training is out of perspective and insufficiently practical. Many of the present workers have obtained no

health visitor's certificate. As regards sick-nursing, four to six months as a probationer in a children's hospital is all that is required. Hospital-trained nurses acquire no experience in the hygiene of expectant and nursing mothers and the feeding of infants. The appointment of a health visitor is much of the nature of a lottery. It is necessary to have a person who is trained in official work for a year or two. The salary should be at least £100 per annum, and for the period of training, scholarships or grants should be available. Sixteen months should be the minimum period of training—twelve at a centre and four at a children's hospital as indicated above. For the last six of the twelve months the candidate should spend at least one-third of her time at a welfare centre, where she will assist at baby weighing, classes for mothers, and will visit at the homes accompanied by a highly experienced health visitor. An extra six months could well be spent in midwifery training or nursing in a fever or tuberculosis hospital. A model training institute should possess—(1) a day nursery for healthy babies and children up to five years of age; (2) two small wards for sick babies not ill enough for hospital treatment; (3) out-patient clinics for expectant mothers, infants and young children.

CHRISTOPHER ROLLESTON.

Otology, Rhinology and Laryngology.

Acute middle-ear infections in children from the standpoint of the pædiatrician (*'Journ. Amer. Med. Assoc.,'* 1920, LXXIV, *p.* 1222).—**L. E. la Fétra** states that among infants and children acute ear infections rank in number and importance only second to respiratory and gastro-intestinal disturbances. A bulging drum is the only diagnostic sign of middle-ear disease. It is only when the temperature is high, the pain acute and the bulging marked that La Fétra incises the drum at once. The infrequency of mastoid complications and the satisfactory results of conservative treatment are his justification for awaiting further indications than those of the day of onset. Paracentesis should be carried out under anæsthesia, preferably chloroform, unless the patient is an infant and only one drum has to be incised. The otitis complicating measles is far more likely to end in mastoiditis than is supposed, and is almost as serious as that complicating scarlet fever. Sinus thrombosis and labyrinthine disease have been excessively rare in the writer's experience. J. D. ROLLESTON.

Gonococcal otitis in infants (*'Deutsche med. Woch.,'* 1919, XLV, *p.* 1165).—**Putzig.**—Little attention has hitherto been paid to the occurrence of gonococci in the purulent discharge of suppurative otitis media in early infancy. In all the cases hitherto published the otitis had developed during or shortly after a typical ophthalmia neonatorum. Putzig now reports a case in which the otitis developed about two months after the cure of the ophthalmia, so that it can hardly be supposed that the gonococci, as in the other cases on record, had passed through the nasal duct into the throat and so into the ear. It was more probable that the otitis was due to the mother, who still had a specific vaginal discharge. As the otorrhœa proved to be very obstinate the possibility of gonococcal infection suggested itself, and on bacteriological examination typical gonococci were found in the ear discharge. Treatment with 1 per cent. protargol was instituted and rapid recovery took place. The case illustrates the necessity of making a

bacteriological examination in all cases of obstinate otorrhœa in infants, especially in those who have previously suffered from ophthalmia, as specific treatment with protargol followed by potassium permanganate cures the otitis in a few days. J. D. Rolleston.

Notes on thirteen cases of aural tuberculosis in infants (*'Journ. of Laryngol., Rhinol., and Otol.,'* 1920, xxxv, *p.* 99).—**D. Guthrie.**—In all but one the disease appeared in the first year of life. All the cases, with one exception, were characterised by a painless, insidious onset, the presence of the discharge being the first sign of the disease. In three cases an abscess had formed and had ruptured through the skin, giving rise to a mastoid fistula. Facial paralysis was present in seven cases. Enlarged periotic glands were noted in every case. Guthrie has little doubt that the infection is milk-borne. Nine of the infants were bottle-fed on unboiled milk ; bottle feeding with boiled milk was used in one case, breast milk in one case, and in two the mode of feeding was not noted. In nine cases the radical mastoid operation was performed, and the area of bone necrosed was very extensive. Four of the operated cases did well as regards the ear condition, though one died of pneumonia two years later. Three cases were fatal from one week to three months after the operation, probably from meningitis. Two of the unoperated cases died, and two are in better health, but with ears still moist.
J. D. Rolleston.

Douching the nose in children (*'New York Med. Journ.,'* 1919, cix, *p.* 942).—**Hitschler** begins by dropping adrenalin solution into each nasal fossa to contract the mucosa and allow a free passage. This should be done in the supine position. Then the child's head is bent well downwards and a soft rubber nasal douche holding ½ oz. or so is used for douching. This may be followed by application of oil to the nasal mucous membrane.
J. Porter Parkinson.

Delayed post-operative hæmorrhage following tonsil and adenoid removal (*'Med. Record,'* 1920, xcvii, *p.* 832).—**E. V. Hubbard** records a case in a girl, aged 8 years, with no family or personal history of hæmophilia, who on the tenth night after the operation was wakened up by a profuse gush of blood from the nose and mouth. The hæmorrhage continued in spite of applications of ice, hydrogen peroxide and adrenalin, but was checked by a post-nasal plug. The tonsil areas had entirely healed and the bleeding was exclusively from the naso-pharynx. Subsequent recovery was uneventful. J. D. Rolleston.

Tonsillectomy versus helio-electric methods (*'New York Med. Journ.,'* 1919, cix, *p.* 13).—**T. M. Stewart** shows (1) that tonsillectomy does not insure against future attacks of sore throat or other diseases for which it is done ; (2) that tonsillar tissue is present in nearly half the cases after operation ; (3) that helio-electric methods, fulguration, etc., do not accomplish more than cutting operations ; (4) that badly-diseased tonsils should be enucleated unless contra-indicated by some unusual factor.
J. Porter Parkinson.

The care of children before and after tonsillectomy (*'New York State Journ. Med.,'* 1919, xix, *p.* 168).—**C. H. Smith** thinks that before advising that a child have an operation for enlarged tonsils it is important

that his general condition should be taken into consideration as well as his throat. A careful history and examination of the child and of his urine and blood are necessary in order to rule out organic disease. It is desirable to try to improve the nutrition of markedly under-nourished children by rest and feeding for a few weeks before operating. The child should be prepared for tonsillectomy as carefully as for any operation. It is advisable that he should have calcium lactate, 5 to 15 grm. after each meal, for two days before the operation. Liquid petrolatum, containing $\frac{1}{3}$ to $\frac{2}{3}$ per cent. menthol (1 to 3 gr. to the ounce), should be dropped into the nose with a medicine dropper three times a day for several days. After the operation he is entitled to an anodyne, and should be kept in bed from five to seven days, with careful nursing and feeding. Preparations should be made to treat hæmorrhage. J. Allan.

The ætiology of arthritis deformans in children (*'Amer. Journ. Dis. Child.*, 1920, xix, *p.* 87).—**A. H. Byfield** reports ten cases in children, aged from $1\frac{1}{2}$ to 12 years, to illustrate the fact that arthritis deformans in children is chiefly due to infection situated in the tonsils and adenoids and accessory nasal sinuses. In children less than three years of age the portal of infection seems to be limited to the tonsils and adenoids. After this time their removal has no power to arrest the progress of the disease. A sinus infection should be suspected as an ætiological factor if after removal of the tonsils and adenoids the temperature still remains raised, the joint condition does not subside and there are leucocytosis and anorexia. The prognosis in uncomplicated cases is good as far as the arrest of the disease is concerned, but the deformity and functional disability may persist for a considerable time. Although orthopædic measures are helpful, the surgical treatment of the nasal sinuses is the most important therapeutic measure indicated. J. D. Rolleston.

Cicatricial stenosis of the larynx in children (*'Journ. de méd. de Bordeaux,'* 1920, xci, *p.* 59).—**E. J. Moure** states that two forms of cicatricial laryngeal stenosis may occur in children. The first is the result of ulceration of the larynx following diphtheria, scarlet fever, and in rare cases typhoid. The second form, which is much the commonest, is the result of a tracheotomy made through the thyroid, the crico-thyroid space or the cricoid. In most of these cases laryngostomy, followed by clearing out the stenosed cavity, should not be carried out before the age of seven or eight years owing to the small size of the larynx and trachea in early childhood, the long duration of the treatment required and the gravity of the pulmonary complications which may occur during this period. If the stenosis is the result of a bad position of the tracheotomy tube, no attention need be paid to the larynx, and a cure will be almost always effected by placing the tube in the proper position. During the period that the larynx is becoming patent again care should be taken to prevent the formation of granulations about the tube by the use of the galvano-cautery or a 1 : 10 solution of zinc chloride. In no case should the tube be removed until the patency of the larynx has been established by laryngoscopic examination. The child should be trained to breathe through the natural channels by obstructing the tracheotomy tube first by day and then by night. J. D. Rolleston.

Foreign bodies in the food- and air-passages (*'Amer. Journ. Dis. Child.,'* 1920, xix, *p.* 119).—**E. E. Graham** thinks that foreign bodies in

the air- and food-passages are much commoner than was formerly supposed. The symptoms vary greatly. The peanut kernel immediately sets up severe laryngitis, tracheitis and bronchitis. The older child may survive the acute symptoms, but will be almost certain to develop pneumonia. Metal objects may remain in the lung for a very long time and do comparatively little damage. It is most important that a skiagram should be taken in every case of swallowing or inhaling a foreign body. When a foreign body does not cast a shadow on the plate, its position can be determined by making the child swallow a capsule filled with bismuth, when the X rays will show the location of the capsule held in position in the œsophagus by the foreign body. A foreign body may be suspected if the following conditions are present: Unexplained leucocytosis, localised symptoms in the lung which do not clear up under treatment, no tubercle bacilli in the sputum and a gradual failure in health and strength. An asthmatoid wheeze is a very important sign. Bronchoscopy, for which no anæsthetic is needed, should be performed as soon as possible after the entrance of the foreign body.

J. D. Rolleston.

Reviews.

La Faculté de Médecine de l'Université de Paris: Année Scolaire 1919–1920. 8vo, pp. 84, with illustrations. Paris: Masson et Cie. Price 1 franc net.

British medical students have always gone in tolerable numbers to Paris for purposes of study, and long may they continue to do so! The Medical Faculty of the University of Paris has recently re-organised its arrangements, enlarged its accommodation, reopened its cliniques and laboratories, and in fact made every preparation for receiving the ever-increasing number of home and foreign students it has to teach—in 1918 the round figures here were 3500 Frenchmen, 300 Frenchwomen, and nearly 800 foreigners. In the elegant brochure now under consideration Prof. Roger, Dean of the Faculty, has put together an account of what the prospective student most wants to know about this great school of medicine. Here will be found details of the hours and subjects of the courses of instruction, the new organisation of the clinical teaching in the thirty-five hospitals associated, the practical work that can be done, the revision classes, the holiday classes, the facilities for original work in the laboratories, the diplomas and certificates that may be obtained, the special arrangements made for strangers, and many other important matters. It is noted that not a few of the lecturers and clinicians named expound themselves in English as well as in French—a consideration that may serve to strengthen the weak knees of the many British medical men and medical students who fancy themselves dullards at foreign languages. The reputation of the Paris Faculty of Medicine is world-wide, and stands in no need of special commendation here. Prof. Roger's guide book thereto is an excellent piece of work, and should be in the hands of anyone who contemplates going to Paris in order to complete his medical education—a most tempting prospect!

A. J. J.-B.

JOHN COAKLEY LETTSOM AN THE FOUNDATION OF THE MEDICAL SOCIETY : being the Presidential Address delivered before the Medical Society of London on October the 8th, 1917. By Sir StCLAIR THOMSON, M.D., F.R.C.P., F.R.C.S., London : Harrison & Sons, 1918. Price 2s. 6d. net.

ONE cannot expect impartiality in a Presidential Address when the Founder of the Society is its subject, and consequently but few commemorative orations are of value to the critical biographer. In the pamphlet before us Sir StClair Thomson has painted a pleasing portrait of John Coakley Lettsom, the Quaker physician ; but the picture suggests the partial pencil of Cosway rather than the bolder, blunt brush of Hogarth. From the historical standpoint we should have preferred the latter, but we are grateful to the author for his sketch, and especially for the plans of Grove Hill, and of the estates in America which once bore the names of Lettsom and Fothergill. One could have dispensed with the Appendix, containing notes on the lives of the Founders of the Medical Society, which have been printed elsewhere, and would have welcomed in their stead a pedigree with precise details of Lettsom's family (such as should accompany every biography), an account of his crusade against the quacks of his time, and a vindication, if possible, of his acceptation of a somewhat questionable expedient when threatened with an action for libel and £5000 damages—an incident which throws its shadow upon an otherwise unblemished perspective. We notice a misprint on p. 47, where " Queen Caroline " is an error for " Queen Charlotte," and take the opportunity of suggesting, in explanation of the presence of her bust on the first medal of the Society, that her patronage of the Lying-in Hospital, which still bears her name, had probably been extended to one of Lettsom's many philanthropic undertakings. The Queen's head would certainly not have been used without permission. Though he was not a genius, Lettsom was a remarkably successful man. By perseverance and hard work, aided by a very small capital, he acquired an enormous practice and a large fortune ; and without something of the " greed of gain " which has been debited against him he would have been unable to give as he gave. His example is a good one for the generations to come, and Sir StClair Thomson's pamphlet should be read by everyone. G. C. P.